DIALOG ONDISC (TM) \*\*\*New Dialog OnDisc(TM): British Education Index UPDATE '98 \*\*\*Early bird registration discount extended. Register before January 31 and pay only \$199. April 15-17 in Philadelphia. PRICE CHANGES \*\*\*Prices have been adjusted in a number of Dialog databases as of January 1. Updated price list is available via ASAF (document numbers 5008-5011) and on the Web at http://phoenix.dialog.com/products/dialog/dial\_pricing.html. >>> Enter BEGIN HOMEBASE for Dialog Announcements <<< of new databases, price changes, etc. >>> Announcements last updated 2Feb98 >>> \* \* \* New CURRENT year ranges installed. \* \* \* SYSTEM: HOME Menu System II: D2 version 1.7.8 term=ASCII \*\*\* DIALOG HOMEBASE(SM) Main Menu \*\*\* Information: 1. Announcements (new files, free connect time, price changes, etc.) 2. Database, Rates, & Command Descriptions 3. Help in Choosing Databases for Your Topic 4. Customer Services (telephone assistance, training, seminars, etc.) 5. Product Descriptions Connections: 6. DIALOG Menus (SM) 7. DIALOG Business Connection(R) and DIALOG Headlines(SM) 8. DIALOG(R) Document Delivery 9. Data Star(R) 10. Other Online Menu Services & Files (MoneyCenter(R), OAG, TNT, etc.) (c) 1998 The Dialog Corporation plc All rights reserved. /NOMENU = Command Mode /L = Logoff/H = HelpEnter an option number to view information or to connect to an online service. Enter a BEGIN command plus a file number to search a database (e.g., B1 for ERIC). ? b 410 13feb98 09:59:11 User2**]**4374 Session D**464.**1 \$0.00 0.004 Hzs FileHomeBase \$0.00 Estimated cost FileHomeBase \$0.00 Estimated cost this search \$0.00 Estimated total session cost 0.004 Hrs. File 410:Chronolog(R) 1981-1998/Jan

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Set Items Description

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  File
         (c) 1997 Congressional Information Service
        41:Pollution Abs 1970-1998/Jan
  File
         (c) 1998 Cambridge Scientific Abstracts
       68:Env.Bib. 1974-1998/Feb
  File
         (c) 1998 Internl Academy at Santa Barbara
       71:ELSEVIER BIOBASE 1994-1998/Jan W4
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  File 76:Life Sciences Collection 1982-1997/Dec
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         (c) format only 1998 Dialog Corporation
*File 155: Due to technical problems, 1998 MEDLINE has been
           restored to the 1997 version.
  File 156:Toxline(R) 1965-1998/Jan
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  File 164:Allied & Alternative Medicine (AMED) 1984-1998/Dec
         (c) 1998 BLHCIS
  File 172:EMBASE Alert 1998/Feb W2
         (c) 1998 Elsevier Science B.V.
  File 173:Adis LMS Drug Alerts 1983-1998/Feb W1
         (c) 1998 Adis International Ltd.
  File 305:Analytical Abstracts 1980-1998/Mar
         (c) 1998 Royal Soc Chemistry
  File 307:DOSE 1997/S2
         (c) 1997 Royal Society of Chemistry
  File 337: CHEMTOX(R) ONLINE 1997/Q4
         (c) 1998 RESOURCE CONSULTANTS, INC.
  File 340:CLAIMS(R)/US PATENT 1950-98/Feb 03
         (c) 1998 IFI/PLENUM DATA CORP
  File 348:EUROPEAN PATENTS 1978-1998/Feb W5
         (c) 1998 EUROPEAN PATENT OFFICE
*File 348: *** All EPO Fulltext data is now online and current! ***
New fulltext will be added weekly. See HELP NEWS 348 for details.
  File 351: DERWENT WPI 1963-1997/UD=9806; UP=9803; UM=9801
         (c) 1998 Derwent Info Ltd
*File 351: Enter HELP NEWS 351 for info. about changes in DWPI coverage.
Output formats have changed for 1998. Enter HELP FORM351 for details.
  File 357: Derwent Biotechnology Abs 1982-1998/Feb B2
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(c) 1998 Derwent Publ Ltd

HILIGHT set on as ''

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File 358: Current BioTech Abs 1983-1998/Feb
        Royal Soc Chem & DECHEMA
 File 370:Science 1996-1998/Dec W1
         (c) 1998 AAAS
 File 375: Derwent Drug Registry 1997-1998/Feb W3
         (c) 1998 Derwent Info Ltd.
 File 376:Derwent Drug File 1964-1982
         (c) 1995 Derwent Info Ltd.
 File 377: Derwent Drug File 1983-1998/Feb W2
         (c) 1998 Derwent Info Ltd.
 File 399:CA SEARCH(R) 1967-1998/UD=12807
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*File 399: Use is subject to the terms of your user/customer agreement.
RANK charge added; see HELP RATES 399.
  File 434:Scisearch(R) Cited Ref Sci 1974-1998/Feb W2
         (c) 1998 Inst for Sci Info
*File 434: Research Fronts, /RF and RF=, will no longer be supplied
by ISI starting January 1998. RANK price increase. See HELP NEWS 434.
 File 456:NME Express 1992-1998/Jan B2
         (c) 1998 J.R. Prous, S.A.
 File 467:ExtraMED(tm) 1996/Dec
         (c) 1996 Informania Ltd.
 File 624:McGraw-Hill Publications 1985-1998/Feb 10
         (c) 1998 McGraw-Hill Co. Inc
*File 624: INDEPENDENT POWER REPORT is now named JN=GLOBAL POWER REPORT
  File 157:Aidsline(R) 1980-1997/Dec
         format only 1997 The Dialog Corporation
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DIALOG(R) File
              5:BIOSIS PREVIEWS(R)
(c) 1998 BIOSIS. All rts. reserv.
            BIOSIS Number: 97508702
11308702
 Suramin inhibits binding of the V3 region of HIV-1 envelope
glycoprotein gp120 to galactosylceramide, the receptor for HIV-1
qp120 on human colon epithelial cells
 Yahi N; Sabatier J-M; Nickel P; Mabrouk K; Gonzalez-Scarano F; Fantini J
  CNRS URA 1455, Fac. de Med. Nord, Bd Pierre Dramard, 13916 Marseille
Cedex 20, FRA
 Journal of Biological Chemistry 269 (39). 1994.
                                                  24349-24353.
  Full Journal Title: Journal of Biological Chemistry
 ISSN: 0021-9258
 Language: ENGLISH
 Print Number: Biological Abstracts Vol. 098 Iss. 011 Ref. 144441
       infection of human colonic epithelial cells HT-29 by human
immunodeficiency virus type 1 (HrV-1) occurs independently of CD4, the main
HIV-1 receptor expressed on lymphocytes and macrophages. Recent studies
from our group have shown that HT-29 cells express the glycosphingolipid
galactosylceramide (GalCer), a potential alternative receptor for the
HIV-1 envelope glycoprotein gp120. The binding of recombinant gp120 to GalCer was blocked by monoclonal antibodies directed
against the third variable region (V3) of gp120, suggesting
that the V3 domain was implicated in GalCer recognition. In the present
report, we show that suramin, a polysulfonyl naphtylurea known to inhibit
retroviral reverse transcriptases in vitro, blocks HIV-1 infection in HT-29
cells. The effect is dose dependent, with a half-maximal inhibition
(IC-50) achieved for a suramin concentration of 54 mu-g/ml.
(3H) suramin was not significantly internalized into HT-29 cells during our
infection assay (i.e. 2 h), we have considered the possibility that the
drug could act at an extracellular step of the HIV-1 cycle. Using a high
performance thin layer chromatography binding assay, we show that suramin
inhibits binding of HIV-1 gp120 to purified GalCer with an IC-50 of 25
mu-q/ml. Suramin does not bind to GalCer, since preincubation of GalCer
with suramin did not prevent the subsequent attachment of gp120. Using a
solid-phase assay, we show that (3H) suramin specifically binds to
recombinant gp120 and that this binding could be blocked by a monoclonal
antibody specific for the conserved GPGRAF motif of the V3 domain of qp120.
We also demonstrate that (3H) suramin binds to multibranched synthetic
GPGRAF peptides that block HIV-1 infection in HT-29 cells. Binding of
(3H) suramin to V3 peptides is specific and inhibited by unlabeled
suramin (IC-50 of 28 mu-g/ml). In contrast, the suramin derivative NF036,
that is unable to block HIV-1 infection in HT-29 cells, does not inhibit
the binding of (3H) suramin to V3 peptides. Taken together, these
results suggest that suramin blocks HIV-1 infection in HT-29 cells because
it binds to the V3 domain of gp120 and hence prevents the interaction
between gp120 and the GalCer receptor.
Descriptors/Keywords: RESEARCH ARTICLE; HUMAN IMMUNODEFICIENCY VIRUS TYPE
  1; SURAMIN; ANTIVIRAL-DRUG; PHARMACODYNAMICS
Concept Codes:
  *02508
          Cytology and Cytochemistry-Human
  *10064
          Biochemical Studies-Proteins, Peptides and Amino Acids
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\*10066 Biochemical Studies-Lipids

\*10068 Biochemical Studies-Carbohydrates

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*10506
           Biophysics-Molecular Properties and Macromolecules
           Biophysics-Membrane Phenomena
  *10508
  *14006
           Digestive System-Pathology
  *22014
           Pharmacology-Digestive System
           Virology-Animal Host Viruses
  *33506
           Chemotherapy-Antiviral Agents
  *38506
           Pathology, General and Miscellaneous-Therapy (1971-)
   12512
   22005
           Pharmacology-Clinical Pharmacology (1972-)
           Medical and Clinical Microbiology-Virology
   36006
Biosystematic Codes:
           Retroviridae (1993-)
   02623
           Hominidae
   86215
Super Taxa:
   Microorganisms; Viruses; Animals; Chordates; Vertebrates; Mammals;
    Primates; Humans
           (Item 1 from file: 348)
 5/5/2
DIALOG(R) File 348: EUROPEAN PATENTS
(c) 1998 EUROPEAN PATENT OFFICE. All rts. reserv.
00770349
**ORDER fax of complete patent from KR SourceOne. See HELP ORDER348**
Methods of producing biologically active peptide dimers
Verfahren zur herstellung von biologisch-aktive Dimerpeptiden
Procede de preparation de peptides dimeres biologiquement actifs
PATENT ASSIGNEE:
  ZymoGenetics, Inc., (627045), 1201 Eastlake Avenue East, Seattle Washington 98102, (US), (applicant designated states:
    AT; BE; CH; DE; ES; FR; GB; GR; IT; LI; LU; NL; SE)
INVENTOR:
  Sledziewski, Andrzej Z., 14543-30th Avenue N.E., Weattle, Washington
    98155, (US)
  Bell, Lillian A., 7545-12th N.W. Avenue, Seattle, Washington 98117, (US)
  Kindsvogel, Wayne R., 6014-24th N.W. Avenue, Seattle, Washington 98115,
    (US)
LEGAL REPRESENTATIVE:
  Grunecker, Kinkeldey, Stockmair & Schwanhausser Anwaltssozietat (100721), Maximilianstrasse 58, 80538 Munchen, (DE)
PATENT (CC, No, Kind, Date): EP 721983 Al 960717 (Basic)
APPLICATION (CC, No, Date):
                               EP 95118567 890118;
PRIORITY (CC, No, Date): US 146877 880122
DESIGNATED STATES: AT; BE; CH; DE; ES; FR; GB; GR; IT; LI; LU; NL; SE
INTERNATIONAL PATENT CLASS: C12N-015/62; C12N-015/13; C07K-016/46;
ABSTRACT EP 721983 A1
    Methods for producing secreted biologically active peptide dimers are
  disclosed. The methods for producing secreted biologically active
  peptide dimers utilize a DNA sequence encoding a peptide requiring
  dimerization for biological activity joined to a dimerizing protein.
  Polypeptides comprising essentially the extracellular domain of a
  human PDGF receptor fused to dimerizing proteins, the portion being
  capable of binding human PDGF or an isoform thereof, are also disclosed.
  The polypeptides may be used within methods for determining the
  presence of and for purifying human PDGF or isoforms thereof.
  Pharmaceutical and diagnostic compositions utilizing the
  polypeptides are also disclosed.
ABSTRACT WORD COUNT: 114
LEGAL STATUS (Type, Pub Date, Kind, Text):
                  960717 Al Published application (Alwith Search Report
 Application:
                             ; A2without Search Report)
                   960717 Al Date of filing of request for examination:
 Examination:
                             951124
LANGUAGE (Publication, Procedural, Application): English; English; English
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FULLTEXT AVAILABILITY:

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Update
Available Text Language
                                     Word Count
      CLAIMS A (English) EPAB96
                                     1003
               (English) EPAB96
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      SPEC A
                                     17100
Total word count - document A
Total word count - document B
                                         0
Total word count - documents A + B 17100
           (Item 2 from file: 348)
DIALOG(R) File 348: EUROPEAN PATENTS
(c) 1998 EUROPEAN PATENT OFFICE. All rts. reserv.
**ORDER fax of complete patent from KR SourceOne. See HELP ORDER348**
ANTI CD-4 ANTIBODIES BLOCKING HIV-INDUCED SYNCYTIA
HIV-INDUZIERTE SYNZYTIEN BLOCKIERENDER ANTI-CD-4-ANTIKORPER
ANTICORPS ANTI-CD4 BLOQUANT LES SYNCYTIA PROVOQUES PAR LE VIH
PATENT ASSIGNEE:
  BIOGEN, INC., (1049451), 14 Cambridge Center, Cambridge Massachusetts
    02142, (US), (applicant designated states:
    AT; BE; CH; DE; DK; ES; FR; GB; GR; IT; LI; LU; NL; SE)
INVENTOR:
  BURKLY, Linda, C., 34 Winthrop Street, West Newton, MA 02165, (US)
  CHISHOLM, Patricia, L., 217 Liberty Street, Quincy, MA 02169, (US)
  THOMAS, David, W., 14 Eisenhower Circle, Wellesley, MA 02181, (US)
  ROSA, Margaret, D., 32 Grove Street, Winchester, MA 01890, (US)
  ROSA, Joseph, J., 32 Grove Street, Winchester, MA 01890, (US)
LEGAL REPRESENTATIVE:
  VOSSIUS & PARTNER (100311), Postfach 86 07 67, 81634 Munchen, (DE)
PATENT (CC, No, Kind, Date): EP 512112 A1 921111 (Basic)
                              EP 512112 B1 970528
                              WO 9209305 920611
APPLICATION (CC, No, Date):
                              EP 92903295 911127; WO 91US8843 911127
PRIORITY (CC, No, Date): US 618542 901127
DESIGNATED STATES: AT; BE; CH; DE; DK; ES; FR; GB; GR; IT; LI; LU; NL; SE
INTERNATIONAL PATENT CLASS: A61K-039/395; C12P-021/08;
CITED PATENTS (WO A): WO 9004978 A; WO 8909782 A
CITED REFERENCES (WO A):
  J. Exp. Med., Vol. 172, October 1990 Franco Celada et al.: "Antibody
    raised against soluble CD4-rgp120 complex recognizes the CD4 moiety and
    blocks membrane fusion without inhibiting CD4-gp120 binding ",
  J. Exp. Med., Vol. 172, October 1990 D. Healey et al.: "Novel anti-CD4
    monoclonal antibodies separate human immunodeficiency virus infection
    and fusion of CD4+ cells from virus binding ",
  Immunology, Vol. 71, 1990 D. Wilks et al.: "Differences in affinity of
    anti-CD4 monoclonal antibodies predict their effects on syncytium
    induction by human immunodeficiency virus ",
  Biochimica et Biophysica Acta, Vol. 989, 1989 T. Kieber-Emmons et al.:
    "The gp120-CD4 interface: structural, immunological and pathological
    considerations ",
  Journal of Virology, Vol. 62, No. 11, November 1988 Michael A. Skinner et
    al.: "Neutralizing antibodies to an immunodominant envelope sequence do
    not prevent gp120 binding to CD4 ",
  Cell, Vol. 60, March 1990 David Camerini et al.: "A CD4 domain important
    for HIV-mediated syncytium formation lies outside the virus binding
    site ",
  The Journal of Biological Chemistry, Vol. 266, No. 9, March 1991
    Alemseged Truneh et al.: "A region in domain 1 och CD4 distinct from
    the primary gp120binding site is involved in HIV infection and
    virus-mediated fusion ",;
LEGAL STATUS (Type, Pub Date, Kind, Text):
                  921111 Al Published application (Alwith Search Report
 Application:
                            ; A2without Search Report)
                  921111 Al Date of filing of request for examination:
 Examination:
                            920819
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941214 Al Date of despatch of first examination report:

Examination:

970528 B1 Granted patent Grant: LANGUAGE (Publication, Procedural, Application): English; English; English FULLTEXT AVAILABILITY: Word Count Available Text Language Update CLAIMS B (English) EPAB97 3921 CLAIMS B (German) EPAB97 3434 (French) EPAB97 4262 CLAIMS B SPEC B (English) EPAB97 25205 Total word count - document A 0 Total word count - document B 36822 Total word count - documents A + B 36822 (Item 3 from file: 348) DIALOG(R) File 348: EUROPEAN PATENTS (c) 1998 EUROPEAN PATENT OFFICE. All rts. reserv. \*\*ORDER fax of complete patent from KR SourceOne. See HELP ORDER348\*\* Novel anti-HIV antibodies. Antikorper gegen H.I.V. Anticorps contre V.I.H. PATENT ASSIGNEE: CIBA-GEIGY AG, (201300), Klybeckstrasse 141, CH-4002 Basel, (CH), (applicant designated states: AT; BE; CH; DE; DK; ES; FR; GB; GR; IT; LI; LU; NL; PT; SE) INVENTOR: Mestan, Jurgen, Dr., Drosselweg 8, W-7819 Denzlingen, (DE) Lazdins, Janis K., Dr., Martinsgasse 13, CH-4051 Basle, (CH) Woods-Cook, Kathie A., Maulbeerstrasse 65, CH-4058 Basle, (CH) Hardman, Norman, Dr., Gstaltenrainweg 67/3, CH-4125 Riehen, (CH) Hochkeppel, Heinz-Kurt, Dr., Traugott Meyer-Strasse 1, CH-4147 Aesch, (CH) PATENT (CC, No, Kind, Date): EP 519866 A1 921223 (Basic) APPLICATION (CC, No, Date): EP 92810445 920610; PRIORITY (CC, No, Date): EP 91810468 910618 DESIGNATED STATES: AT; BE; CH; DE; DK; ES; FR; GB; GR; IT; LI; LU; NL; PT; INTERNATIONAL PATENT CLASS: C12N-015/13; C12P-021/08; C12N-015/63; C12N-005/10; C12N-005/20; A61K-039/42; G01N-033/569; G01N-033/577; CITED PATENTS (EP A): WO 9107494 A; WO 9107493 A; WO 8904376 A; EP 345461 A ; US 4843011 A; US 4843011 A CITED REFERENCES (EP A): NATURE. vol. 332, 24 March 1988, LONDON GB pages 323 - 327; L. RIECHMANN ET AL.: 'Reshaping human antibodies for therapy.'; ABSTRACT EP 519866 A1 The invention concerns monoclonal antibodies and antibody derivatives directed against HIV core protein p24 which recognize p24 expressed on the surface of HIV-infected macrophages and/or kill HIV-infected cells. The monoclonal antibodies of the invention may be murine antibodies or chimeric antibodies consisting of human constant regions and murine variable or hypervariable regions. Methods of manufacture of such

antibodies, hybridoma or transfectoma cell lines secreting them and methods for production of the hybridoma or transfectoma cell lines are also encompassed by this invention. The invention further concerns recombinant DNA comprising an insert coding for the variable regions of antibodies against HIV core protein p24 having the mentioned properties, methods of manufacture of such recombinant DNAs, and host cells transformed with such recombinant DNAs.

The antibodies are especially useful for the prevention of the progression of AIDS and for the treatment of AMS, but can also be used for the diagnosis of HIV infection in an immunoassay. ABSTRACT WORD COUNT: 157

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LEGAL STATUS (Type, Pub Date, Kind, Text):
                  921223 Al Published application (Alwith Search Report
                            ; A2without Search Report)
                  940622 Al Date on which the European patent application
 Withdrawal:
                            was deemed to be withdrawn: 930624
LANGUAGE (Publication, Procedural, Application): English; English
FULLTEXT AVAILABILITY:
Available Text Language
                           Update
                                     Word Count
      CLAIMS A (English) EPABF1
                                     2394
               (English) EPABF1
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      SPEC A
                                     25221
Total word count - document A
Total word count - document B
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                                     25221
Total word count - documents A + B
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           (Item 4 from file: 348)
DIALOG(R) File 348: EUROPEAN PATENTS
(c) 1998 EUROPEAN PATENT OFFICE. All rts. reserv.
00418264
**ORDER fax of complete patent from KR SourceOne. See HELP ORDER348**
Non-human primate CD4 polypeptides and human CD4 molecules capable of
    being glycosylated
Nichtmenschliche primaten CD4-Polypeptide und menschliche glykosilierbare
    CD4-Molekule
Polypeptides CD4 de primates non humains et molecules CD4 humaines
    susceptibles d'etre glycosylees
PATENT ASSIGNEE:
  THE GENERAL HOSPITAL CORPORATION, (370400), 55 Fruit Street, Boston, MA
    02114, (US), (applicant designated states:
    AT; BE; CH; DE; DK; ES; FR; GB; GR; IT; LI; LU; NL; SE)
INVENTOR:
  Seed, Brian, Molecular Biology, Wellman 9, Boston, MA 02114, (US)
  Camerini, David, 1520 Rodney Drive, Apt. 203, Los Angeles, CA 90027, (US)
LEGAL REPRESENTATIVE:
  Fischer, Hans-Jurgen, Dr. et al (70771), Hoechst AG Patent- und
    Lizenzabteilung Gebaude K 801, 65926 Frankfurt am Main, (DE)
PATENT (CC, No, Kind, Date): EP 414178 A2 910227 (Basic)
                              EP 414178 A3 911113
                              EP 414178 B1 961204
                              EP 90115877 900818;
APPLICATION (CC, No, Date):
PRIORITY (CC, No, Date): US 397782 890823
DESIGNATED STATES: AT; BE; CH; DE; DK; ES; FR; GB; GR; IT; LI; LU; NL; SE
INTERNATIONAL PATENT CLASS: C12N-015/12; C12N-015/62; C12N-015/13;
  C12P-021/02; C12Q-001/70; A61K-038/00; G01N-033/569;
CITED PATENTS (EP A): EP 314317 A; WO 8801304 A
CITED REFERENCES (EP A):
  CELL, vol. 42, August 1985, pages 93-104; P.J. MADDON et al.: "The
    isolation and nucleotide sequence of a cDNA encoding the T cell surface
    protein T4: A new member of the immunoglobulin gene family"
  NATURE, vol. 331, no. 6151, 7th January 1988, pages 78-81; R.E. HUSSEY et
    al.: "A soluble CD4 protein selectively inhibits HIV replication and
    syncytium formation"
  NATURE, vol. 331, no. 6151, 7th January 1988, pages 84-86; A. TRAUNECKER
    et al.: "Soluble CD4 molecules neutralize human immunodeficiency virus
    type 1"
  NATURE, vol. 331, no. 6151, 7th January 1988, pages 82-84; K.C. DEEN et
    al.: "A soluble form of CD4 (T4) protein inhibits AIDS virus infection"
  NATURE, vol. 331, no. 6151, 7th January 1988, pages 76-78; R.A. FISHER et
```

ABSTRACT EP 414178 A2

The invention relates to substantially pure non-human primate CD4, and fragments thereof which bind to HIV or SIV gp120. The invention also relates to gp120 binding molecules related to human CD4 but which may exist in glycosylated form.

al.: "HIV infection is blocked in vitro by recombinant soluble CD4";

The invention also relates to fusion proteins which comprise the CD4 molecules of the invention, or fragments thereof, and an immunoglobulin light or heavy chain, wherein the variable region of the light or heavy chain has been replaced with CD4 or fragment thereof which is capable of binding to gp120. The invention also relates to fusion proteins comprising the CD4 molecules of the invention and a cytotoxic polypeptide.

The invention also relates to an immunoglobulin-like molecules comprising the fusion proteins of the invention together with an immunoglobulin light or heavy chain.

The invention also relates to methods of treating HIV or SIV infection comprising administering the CD4 molecules of the invention, glycoproteins, fragments thereof, fusion proteins or immunoglobulin-like molecules of the invention to an animal.

The invention also relates to assays for HIV or SIV comprising contacting a sample suspected of containing HIV or SIV gp120 with the CD4 molecules of the invention, fragments thereof, glycoproteins, immunoglobulin-like molecules, or fusion proteins of the invention, and detecting whether a complex is formed.

The invention also relates to nucleic acid molecules which specify the proteins, glycoproteins and fusion proteins of the invention as weil as vectors and transformed hosts.

ABSTRACT WORD COUNT: 303

LEGAL STATUS (Type, Pub Date, Kind, Text):

910227 A2 Published application (Alwith Search Report Application:

; A2without Search Report)

Examination: 910227 A2 Date of filing of request for examination:

901221

Search Report: 911113 A3 Separate publication of the European or

International search report

920603 A2 Representative (change) Change:

Examination: 930922 A2 Date of despatch of first examination report:

930811

Grant: 961204 B1 Granted patent 971126 B1 No opposition filed Oppn None:

LANGUAGE (Publication, Procedural, Application): English; English; English FULLTEXT AVAILABILITY:

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                         Update
                                  Word Count
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     CLAIMS B (English) EPAB96
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     CLAIMS B
              (German) EPAB96
                                   1723
     CLAIMS B
              (French) EPAB96
                                   1898
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                                  10862
     SPEC B
               (English) EPAB96
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Total word count - document A
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Total word count - document B
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Total word count - documents A + B 28423
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(Item 5 from file: 348)
DIALOG(R) File 348: EUROPEAN PATENTS
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#### 00335245

\*\*ORDER fax of complete patent from KR SourceOne. See HELP ORDER348\*\* Methods of producing secreted receptor analogs Verfahren zur Herstellung von sekretierten Rezeptoranalogen Procede de preparation d'analogues de recepteurs secretes PATENT ASSIGNEE:

ZymoGenetics, Inc., (627045), 1201 Eastlake Avenue East, Seattle Washington 98102, (US), (applicant designated states: AT; BE; CH; DE; ES; FR; GB; GR; IT; LI; LU; NL; SE)

# INVENTOR:

Sledziewski, Andrzej Z., 14543-30th Avenue N.E., Seattle Washington 98155

```
Bell, Lillian A., 7545-12th N.W. Avenue, Seattle Washington 98117, (US)
  Kindsvogel, Wayne R., 6014-24th Avenue N.E., Seattle Washington 98115,
LEGAL REPRESENTATIVE:
  Grunecker, Kinkeldey, Stockmair & Schwanhausser Anwaltssozietat (100721) , Maximilianstrasse 58, 80538 Munchen, (DE)
PATENT (CC, No, Kind, Date): EP 325224 A2 890726 (Basic)
EP 325224 A3 910417
EP 325224 B1 960731
APPLICATION (CC, No, Date):
                               EP 89100787 890118;
PRIORITY (CC, No, Date): US 146877 880122
DESIGNATED STATES: AT; BE; CH; DE; ES; FR; GB; GR; IT; LI; LU; NL; SE
INTERNATIONAL PATENT CLASS: C12N-015/12; C12P-021/00; G01N-033/68;
  A61K-038/17;
CITED PATENTS (EP A): EP 244221 A; EP 173494 A; EP 327369 A
CITED REFERENCES (EP A):
                                                      vol. 84, May 1987,
  PROC. NATL. ACAD. SCI.
    pages 2936-2940, Washington, DC, US; N.R.J. GASCOIGNE et al.:
    "Secretion of a chimeric T-cell receptor-immunoglobulin protein"
  PROTEIN ENGINEERING
                                                      vol. 1, no. 3, June
    1987, page 237, Oxford, GB; H. RIEDEL et al.: "Receptor chimeras: a new
    approach to study mitogenic and oncogenic transmembrane signalling"
                                                      vol. 323, 18 September
  NATURE
    1986, pages 226-232, London, GB; Y. YARDEN et al.: "Structure of the
    receptor for platelet-derived growth factor helps define a family of
    closely related growth factor receptors"
  BIOLOGICAL ABSTRACTS DATABASE
                                                      abstract no. 86076857;
    L. CLAESSON-WELSH et al.: "Complementary DNA cloning and expression of
    a human platelet-derived growth factor PDGF receptor specific for
    B-chain-containing PDGF molecules" & Mol. Cell. Biol. 1988, vol. 8, no.
    8, pages 3476-3486
                                                      vol. 85, May 1988,
  PROC. NATL. ACAD. SCI.
    pages 3435-3439, Washington, DC, US; R.G.K. GRONWALD et al.: "Cloning
    and expression of a cDNA coding for the human platelet-derived growth
    factor receptor: Evidence for more than one receptor class"
  CHEMICAL ABSTRACTS
                                                      vol. 110, no. 23, 5
    June 1989, abstract no. 210567f, Columbus, Ohio, US; R.A. MARIUZZA et
    al.: "Secretion of a homodimeric VaCkT-cell receptor-immunoglobulin
    chimeric protein" & J. Biol. Chem. 1989, vol. 264, no. 13, pages
    7310-7316
  BIOCHEMICAL AND BIOPHYSICAL RESEARCH COMMUNICATIONS
    vol. 149, no. 3, 31 December 1987, pages 960-968, NY, US; Y. KUWANA et
    al.: "Expression of chimeric receptor composed of
    immunoglobulin-derived V resions and T-cell receptor-derived C regions"
ABSTRACT EP 325224 A2
    Methods for producing a secreted receptor analogs and biologically
  active peptide dimers are disclosed. The methods for producing secreted
  receptor analogs and biologically active peptide dimers utilize a DNA
  sequence encoding a receptor analog or a peptide requiring dimerization
  for biological activity joined to a dimerizing protein. The receptor
  analog includes a ligand-binding domain. Polypeptides comprising
  essentially the extracellular domain of a human PDGF receptor fused to
  dimerizing proteins, the portion being capable of binding human PDGF or
  an isoform thereof, are also disclosed. The polypeptides may be
  used within methods for determining the presence of and for purifying
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human PDGF or isoforms thereof. Pharmaceutical and diagnostic compositions utilizing the polypeptides are also disclosed. ABSTRACT WORD COUNT: 118

LEGAL STATUS (Type, Pub Date, Kind, Text):

Application: 890726 A2 Published application (Alwith Search Report

; A2without Search Report)

Search Report: 910417 A3 Separate publication of the European or International search report

```
911023 A2 Date of filing of request for examination:
Examination:
                            910826
                  920108 A2 Applicant (transfer of rights) (change):
*Assignee:
                            ZYMOGENETICS, INC. (627043) 4225 Roosevelt Way
                            N.E. Seattle, WA 98108 (US) (applicant
                            designated states:
                            AT; BE; CH; DE; ES; FR; GB; GR; IT; LI; LU; NL; SE)
 Examination:
                  921021 A2 Date of despatch of first examination report:
                            920904
                  940119 A2 Representative (change)
Change:
                  940928 A2 Applicant (transfer of rights) (change):
*Assignee:
                            ZYMOGENETICS, INC. (627045) 1201 Eastlake
                            Avenue East Seattle Washington 98102 (US)
                            (applicant designated states:
                            AT; BE; CH; DE; ES; FR; GB; GR; IT; LI; LU; NL; SE)
Grant:
                  960731 B1 Granted patent
                  970723 B1 No opposition filed
Oppn None:
LANGUAGE (Publication, Procedural, Application): English; English; English
FULLTEXT AVAILABILITY:
Available Text Language
                           Update
                                     Word Count
     CLAIMS B (English) EPAB96
                                      2754
      CLAIMS B (German) EPAB96
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               (French) EPAB96
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                (English) EPAB96
Total word count - document A
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Total word count - document B
Total word count - documents A + B
                                     24011
 5/5/7
           (Item 6 from file: 348)
DIALOG(R) File 348: EUROPEAN PATENTS
(c) 1998 EUROPEAN PATENT OFFICE. All rts. reserv.
00333274
**ORDER fax of complete patent from KR SourceOne. See HELP ORDER348**
    SEQUENCES, RECOMBINANT DNA MOLECULES AND PROCESSES FOR PRODUCING
    SOLUBLE T4 PROTEINS.
                REKOMBINANT-DNS-MOLEKULE UND VERFAHREN ZUR HERSTELLUNG
DNS-SEQUENZEN,
    LOSLICHER T4-PROTEINE.
SEQUENCES D'ADN, MOLECULES D'ADN RECOMBINANT ET PROCEDES DE PRODUCTION DE
    PROTEINES T4 SOLUBLES.
PATENT ASSIGNEE:
  BIOGEN, INC., (1049451), 14 Cambridge Center, Cambridge Massachusetts
    02142, (US), (applicant designated states:
    AT; BE; CH; DE; FR; GB; IT; LI; LU; NL; SE)
INVENTOR:
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  GILBERT, Walter, 15 Gray Gardens West, Cambridge, MA 02138, (US)
  SATO, Vicki, L., 43 Larch Road, Cambridge, MA 02138, (US)
  FLAVELL, Richard, A., 182 Reservoir Road, Killingworth, CT 06417, (US)
 MARAGANORE, John, M., 84 Patrick Road, Tewksbury, MA 01876, (US)
  LIU, Theresa, R., 102 Emerson Road, Milton, MA 02186, (US)
LEGAL REPRESENTATIVE:
  Bannerman, David Gardner et al (28001), Withers & Rogers 4 Dyer's
    Buildings Holborn, London, EC1N 2JT, (GB)
PATENT (CC, No, Kind, Date): EP 347435 A1 891227 (Basic)
                              EP 347435 Al 911121
                              WO 8901940 890309
                              EP 88908543 880901; WO 88US2940 880901
APPLICATION (CC, No, Date):
PRIORITY (CC, No, Date): US 94322 870904; US 141649 880107
DESIGNATED STATES: AT; BE; CH; DE; FR; GB; IT; LI; LU; NL; SE
INTERNATIONAL PATENT CLASS: C07H-015/12; C12Q-001/70; C12Q-001/02;
  C12Q-001/06; C12P-021/00; C12P-019/34; C12P-001/04; C12N-015/00;
  C12N-007/00; C07K-013/00;
CITED PATENTS (EP A): WO 8801304 A; WO 8901779 A; WO 8902922 A
CITED REFERENCES (EP A):
```

See also references of WO8901940; CITED REFERENCES (WO A):

- Science, Vol. 234, issued 1986 November, (Washington, D.C., U.S.A.), (Q.J. SATTENTAU et al), "Epitopes of the CD4 Antigen and HIV Infection" see pages 1120-1123. see particularly page 1120
- Science, Vol. 234, issued 1986, November, (Washington, D.C. U.S.A) (J.A. HOXIE et al), "Alterations in T4 (CD4) Protein and mRNA Synthesis in Cells Infected with HIV" see pages 1123-1127. see particularly page 1123
- Proceedings National Academy of Sciences, U.S.A., Volume 84, issued 1987 December (Washington, D.C. U.S.A), (P.J.MADDON et al.), "Structure and Expression of the Human and Mouse T4 Genes", see pages 9155-9159, see particularly page 9155 and 9156.
- Proceedings National Academy of Sciences, U.S.A., Volume 84, issued 1987 December (Washington, D.C. U.S.A), (P.J.MADDON et al.), "Structure and Expression of the Human and Mouse T4 Genes", see pages 9155-9159, see Particularly page 9155 and 9156.
- Proceedings National Academy of Sciences, U.S.A., Volume 84, issued 1987, June (Washington, D.C. U.S.A.), (T.C. CHANH et al.), "Monoclonal Anti-Idiotypic Antibody Mimics the CD4 Receptor and Binds Human Immunodeficiency Virus" see pages 3891-3895. see particularly page 3891.
- Cell, Volume 47, issued 1986, November, (Cambridge, Mass., U.S.A.) (P.J. MADDON et al), "The T4 Gene Encodes the Aids Virus Receptor and is Expressed in the Immune System and the Brain", see pages 333-348, see particularly pages 333-335.

IDEM
CHEMICAL ABSTRACTS, Volume 107, No. 15, issued 1987 October 12 (Columbus, Ohio, U.S.A.), T.L. LENTZ et al, "Rabies Virus Binding to Cellular Membranes Measured by Enzyme Immunoassay" see page 359, column 1, the Abstract No. 131853f, Muscle Nerve, 1985, 8(4), 336-345 (Eng).

CHEMICAL ABSTRACTS, Volume 106, No. 21, issued 1987, May 25, (Columbus, Ohio, U.S.A), J.P.ZIMMER et al., "Diphenylhydantoin (DPH) Blocks HIV-Receptor on T-Lymphocyte Surface", see page 123, column 1, the Abstract No. 168522c, Blut, 1986, 53(6), 447-450 (Eng).

Biological Abstracts, Volume 85, No. 4, issued 1988, April 15 (Philadelphia, PA, U.S.A), A.G. DALGLEISH et al., 'Neutralization of HIV Isolates by Anti-Idiotypic Antibodies which Mimic the T4 (CD4) Epitope: A Potential Aids Vaccine' see page 222, Abstracts No. 37595, Lancet 2 (8567): 1047-1050 (Eng).;

# ABSTRACT EP 347435 A1

This invention relates to DNA sequences, recombinant DNA molecules and processes for producing soluble T4 protein. More particularly, this invention relates to DNA sequences that are characterized in that they code on expression in an appropriate unicellular host for soluble forms of T4, the receptor on the surface of T4(sup +) lymphocytes, or derivatives thereof. In accordance with this invention, the DNA sequences, recombinant DNA molecules and processes of this invention may be employed to produce soluble T4 essentially free of other proteins of human origin. This soluble protein may then advantageously be used in the immunotherapeutic and diagnostic compositions and methods of this invention. The soluble T4-based immunotherapeutic compositions and methods of this invention are useful in treating immunodeficient patients suffering from diseases caused by infective agents whose primary targets are T4(sup +) lymphocytes. According to a preferred embodiment, this invention relates to soluble T4-based compositions and methods which are useful in preventing, treating or detecting acquired immune deficiency syndrome, AIDS related complex and HIV infection.

ABSTRACT WORD COUNT: 171

LEGAL STATUS (Type, Pub Date, Kind, Text):

Application: 891227 Al Published application (Alwith Search Report

;A2without Search Report)

Examination: 891227 Al Date of filing of request for examination:

890420

900207 Al Inventor (change) 911121 Al Drawing up of a supplementary European search Search Report: report: 910930 920408 Al Date of despatch of first examination report: Examination: 920217 941207 Al Date on which the European patent application Withdrawal: was deemed to be withdrawn: 930108 LANGUAGE (Publication, Procedural, Application): English; English FULLTEXT AVAILABILITY: Available Text Language Word Count Update CLAIMS A (English) EPABF1 2307 (English) EPABF1 23120 SPEC A 25427 Total word count - document A Total word count - document B 0 Total word count - documents A + B 25427 (Item 7 from file: 348) 5/5/8 DIALOG(R) File 348: EUROPEAN PATENTS (c) 1998 EUROPEAN PATENT OFFICE. All rts. reserv. 00332035 \*\*ORDER fax of complete patent from KR SourceOne. See HELP ORDER348\*\* MONOCLONAL ANTIBODIES NEUTRALIZING HIV-1. HIV-1 NEUTRALISIERENDE MONOKLONALE ANTIKORPER. ANTICORPS MONOCLONAUX NEUTRALISANT LE HIV-1. PATENT ASSIGNEE: TANOX BIOSYSTEMS, INC., (1023240), 10301 Stella Link Rd., Houston, TX 77025, (US), (applicant designated states: AT; BE; CH; DE; FR; GB; IT; LI; LU; NL; SE) BAYLOR COLLEGE OF MEDICINE, (401892), 1200 Moursund Avenue, Houston, TX 77030, (US), (applicant designated states: AT; BE; CH; DE; FR; GB; IT; LI; LU; NL; SE) **INVENTOR:** CHANG, Tse, Wen, 3323 Robinhood, Houston, TX 77005, (US) FUNG, Sek, C., 3511 Deal, Houston, TX 77025, (US) SUN, Cecily, Rou-Yun, 3103 Nottingham Boulevard, Houston, TX 77005, (US) SUN, Bill, Nai-Chau, 3103 Nottingham Boulevard, Houston, TX 77005, (US) CHANG, Nancy, T., 3323 Robinhood, Houston, TX 77005, (US) LIOU, Ruey, Shyan, 1814 Riverbend Crossing, Sugarland, TX 77478, (US) ROSEN, Edward, M., 2207 South Braeswood Boulevard, Houston, TX 77030, (US) LEGAL REPRESENTATIVE: VOSSIUS & PARTNER (100311), Postfach 86 07 67, D-81634 Munchen, (DE) PATENT (CC, No, Kind, Date): EP 366718 A1 900509 (Basic) EP 366718 B1 950510 WO 8809181 881201 APPLICATION (CC, No, Date): EP 88906589 880527; WO 88US1797 880527 PRIORITY (CC, No, Date): US 57445 870529; US 137861 871224; US 197766 880523 DESIGNATED STATES: AT; BE; CH; DE; FR; GB; IT; LI; LU; NL; SE INTERNATIONAL PATENT CLASS: A61K-039/395; C12P-021/08; CITED REFERENCES (EP A): See also references of WO8809181; LEGAL STATUS (Type, Pub Date, Kind, Text): 900509 Al Published application (Alwith Search Report Application: ;A2without Search Report) 900509 Al Date of filing of request for examination: Examination: 891127

900905 Al Representative (change)

931222 Al Representative (change)

LANGUAGE (Publication, Procedural, Application): English; English; English

920817

960501 B1 No opposition filed

950510 B1 Granted patent

920930 Al Date of despatch of first examination report:

Change:

Change:

Grant:
Oppn None:

Examination:

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FULLTEXT AVAILABILITY:
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                                      Word Count
Available Text Language
                           EPAB95
                                        169
      CLAIMS B (English)
                 (German) EPAB95
                                        163
      CLAIMS B
                 (French) EPAB95
      CLAIMS B
                                        182
                (English) EPAB95
                                      17442
      SPEC B
Total word count - document A
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Total word count - document B
                                      17956
Total word count - documents A + B
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           (Item 8 from file: 348)
 5/5/9
DIALOG(R) File 348: EUROPEAN PATENTS
(c) 1998 EUROPEAN PATENT OFFICE. All rts. reserv.
00310586
**ORDER fax of complete patent from KR SourceOne. See HELP ORDER348**
Novel vaccines.
Impfstoff.
Vaccin.
PATENT ASSIGNEE:
  HIVER LIMITED, (958250), 13 Southampton Place, London WC1A 2AJ, (GB),
    (applicant designated states: AT; BE; CH; DE; ES; FR; GB; GR; IT; LI; LU; NL; SE)
INVENTOR:
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  Beverley, Peter Charles Leonard, 111 Castlehaven Road, London NW1 8SJ,
  Sattentau, Quentin James, 5 Painsthorpe Road, Stoke Newington, London N16
    ORB, (GB)
  Kennedy, Ronald Curtis, 2707 Indian Ridge Drive, San Antonio, Texas 78231
    , (US)
  Chanh, Tran Cong, 14814 Personality, San Antonio, Texas 78248, (US)
LEGAL REPRESENTATIVE:
  Ablewhite, Alan James et al (27521), MARKS & CLERK 57/60 Lincoln's Inn
    Fields, London WC2A 3LS, (GB)
PATENT (CC, No, Kind, Date): EP 287226 Al 881019 (Basic)
APPLICATION (CC, No, Date): EP 88302566 880323;
PRIORITY (CC, No, Date): GB 8706836 870323; US 44716 870501; GB 8712829
    870601; GB 8716632 870715; GB 8725519 871030
DESIGNATED STATES: AT; BE; CH; DE; ES; FR; GB; GR; IT; LI; LU; NL; SE
INTERNATIONAL PATENT CLASS: A61K-039/21; A61K-039/395; A61K-039/42;
  G01N-033/569
CITED REFERENCES (EP A):
  SCIENCE, Research News, vol. 233, 12th September 1986, pages 1149-1153;
    D.M. BARNES: "Strategies for an AIDS vaccine"
  FEDERATION PROCEEDINGS, vol. 46, no. 4, 5th March 1987, page 1352, no.
    6040; E.M. ZHOU et al.: "Mouse monoclonal anti-anti.cd4, antibodies
    recognize human immunodeficiency virus antigens"
  FEDERATION PROCEEDINGS, vol. 46, no. 4, 5th March 1987, page 1352, no.
    6041; T.C. CHANH et al.: "Anti-idiotypic antibodies against OKT4A bind
    to human immunodeficiency virus"
  BIOLOGICAL ABSTRACTS, vol. 84, 1987, ref. no. 78240, no. 78239,
    Philadelphia, P.A., US; D.S. LUDWIG et al.: "Anti-receptor antibodies designed to elicit 'internal image'-bearing anti-idiotypes: A possible
    AIDS vaccine" & MED HYPOTHESES 23(3): 303-308. 1987.
  PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES USA, vol. 84, June 1987,
    pages 3891-3895; T.C. CHANH et al.: "Monoclonal anti-idiotypic antibody
    mimics the CD4 receptor and binds human immunodeficiency virus"
  THE LANCET, vol. II, no. 8567, 7th November 1987, pages 1047-1050,
    London, GB; A.G. DALGLEISH et al.: "Neutralisation of hiv isolates by
    anti-idiotypic antibodies which mimic the T4(CD4) epitope: A potential
    AIDS vaccine"
  THE JOURNAL OF IMMUNOLOGY, vol. 139, no. 9, 1st November 1987, pages
    2950-2956, The American Association of Immunologists, US; E.-M. ZHOU et
```

al.: "Immune response to human immuniodeficiency virus in vivo

administration of anti-idiotype induces an anti-gp160 response specific

for a synthetic peptide"

THE JOURNAL OF IMMUNOLOGY, vol. 137, no. 9, 1st November 1986, pages 2937-2944, The American Association of Immunologists, US; J.S. McDOUGAL: "Binding of the human retrovirus HTLV-III/LAV/ARV/HIV to the CD4(T4) molecule: conformation dependence, epitope mapping, antibody inhibition, and potential for idiotypic mimicry"

SCIENCE, vol. 231, 28th March 1986, pages 1556-1559; R.C. KENNEDY et al.: "Antiserum to a synthetic peptide recognizes the HTLV-III envelope glycoprotein";

#### ABSTRACT EP 287226 Al

The present invention relates to vaccines against AIDS-like viruses comprising antibodies and their equivalents specific for such viruses or cellular receptors therefor, and to methods of treatment and prophylaxis using such vaccines.

ABSTRACT WORD COUNT: 36

LEGAL STATUS (Type, Pub Date, Kind, Text):

Application: 881019 Al Published application (Alwith Search Report

; A2without Search Report)

Examination: 890503 Al Date of filing of request for examination:

890307

Examination: 910814 Al Date of despatch of first examination report:

910627

Withdrawal: 930602 Al Date on which the European patent application

was deemed to be withdrawn: 921105

LANGUAGE (Publication, Procedural, Application): English; English; English FULLTEXT AVAILABILITY:

Available Text Language Update Word Count

CLAIMS A (English) EPABF1 231
SPEC A (English) EPABF1 12491
Total word count - document A 12722
Total word count - document B

Total word count - document B 0

Total word count - documents A + B 12722

5/5/10 (Item 9 from file: 348) DIALOG(R) File 348:EUROPEAN PATENTS

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#### 00309467

\*\*ORDER fax of complete patent from KR SourceOne. See HELP ORDER348\*\*
Methods and compositions for the use of HIV env polypeptides and
antibodies thereto

Verfahren und Zubereitungen fur die Verwendung von HIV-env-Polypeptiden und Antikorpern

Methodes et compositions pour l'utilisation de **polypeptides** env et anticorps anti-env de HIV

# PATENT ASSIGNEE:

GENENTECH, INC., (210480), 460 Point San Bruno Boulevard, South San Francisco California 94080, (US), (applicant designated states: AT;BE;CH;DE;ES;FR;GB;GR;IT;LI;LU;NL;SE)

## INVENTOR:

Berman, Phillip W., 1739 Lexington Avenue, San Mateo, CA 94402, (US) Gregory, Timothy J., 414 Pinehill Road, Hillsborough, CA 94010, (US) Lasky, Lawrence A., Star Route Box 40, Sausalito, CA 94965, (US)

Nakamura, Gerald R., 1923, 29th Avenue, San Francisco, CA 94116, (US)

Patzer, Eric J., 470 Tahos Road, Orinda, CA 94563, (US)

Patton, John S., 330 Emerald Avenue, San Carlos, CA 94070, (US)

Vitetta, Ellen S., 6914 Pemberton Drive, Dallas, TX 75230, (US)

## LEGAL REPRESENTATIVE:

Stuart, Ian Alexander et al (50492), MEWBURN ELLIS York House 23 Kingsway , London WC2B 6HP, (GB)

PATENT (CC, No, Kind, Date): EP 279688 A2 880824 (Basic)

EP 279688 A3 890913 EP 279688 B1 970416 APPLICATION (CC, No, Date): EP 88301425 880219;
PRIORITY (CC, No, Date): US 16809 870220; US 57061 870601; US 155336 880212
DESIGNATED STATES: AT; BE; CH; DE; ES; FR; GB; GR; IT; LI; LU; NL; SE
INTERNATIONAL PATENT CLASS: A61K-038/00; A61K-039/21; C12P-021/00;
A61K-047/00;

CITED PATENTS (EP A): WO 8602383 A; EP 187041 A; EP 273716 A CITED REFERENCES (EP A):

CELL, vol. 41, 1985, pages 653-654; E.S. VITETTA et al.: "Immunotoxins: Redirecting nature's poisons"

CANCER RESEARCH, vol. 46, July 1986, pages 3295-3298; M. KR\NKE et al.: "Selective killing of human T-lymphotropic virus-I infected leukemic T-cells by monoclonal anti-interleukin 2 receptor antibody-ricin a chain conjugates: Potentiation by ammonium chloride and monensin"

SCIENCE, vol. 231, 1986, pages 382-385; J.S. McDOUGAL et al.: "Binding of HTLV-III/LAV to T4+ T Cells by a complex of the 110K viral protein and the T4 molecule"

BIOLOGICAL ABSTRACTS, vol. 80, 1985, abstract no. 51314, Biological Abstracts, Inc., Philadelphia, PA, US; A.H. FILIPOVICH et al.: "Graft-vs.-host disease prophylaxis with anti-T-cell monoclonal antibody OKT3, prednisone and methotrexate in allogeneic bone-marrow transplantation", & BR J HAEMATOL. 60(1): 143-152 1985

CHEMICAL ABSTRACTS, vol. 105, no. 21, 24th November 1986, page 563, abstract no. 189109t, Columbus, Ohio, US; D.A. WEIGENT et al.: "The HTLV-III envelope protein contains a hexapeptide homologous to a region of interleukin-2 that binds to the interleukin-2 receptor", & BIOCHEM. BIOPHYS. RES. COMMUN. 1986, 139(1), 367-74

SCIENCE, vol. 233, 12th September 1986, pages 1149-1153; D.M. BARNES: "Strategies for an AIDS vaccine"

PROCEEDINGS NATIONAL ACADEMY OF SCIENCES, vol. 83, September 1986, pages 7023-7027, US; W.G. ROBEY: "Prospect for prevention of human immunodeficiency virus infection: Purified 120-kDa envelope glycoprotein induces neutralizing antibody";

## ABSTRACT EP 279688 A2

The Human Immunodeficiency Virus envelope protein or its fragments that are capable of binding to the T4 helper lymphocyte receptor are used in therapeutically effective doses for the treatment of immunoinflammatory disorders or diseases. Amino acid residues that constitue an essential portion of the T4 receptor binding domain of HIV env fall within a 64 residue sequence extending about from residues 411 to 454 of the 3B isolate. This domain is useful as a vaccine component, or for cytotoxic T cell targeting when conjugated with a target cell binding substance. HIV env which is devoid of a functional T4 receptor binding domain is useful as a vaccine for immunization against HIV infection. Antibodies capable of binding this domain also are provided for therapeutic and diagnostic use. An immunotoxin comprising a monoclonal antibody to a virally encoded cell surface antigen, linked to a toxin such as ricin A chain, is disclosed. Also, a method of killing virally infected cells such as HIV infected cells, comprising administering to the infected cells a therapeutically effective amount of the immunotoxin is disclosed.

ABSTRACT WORD COUNT: 182

LEGAL STATUS (Type, Pub Date, Kind, Text):

Application: 880824 A2 Published application (Alwith Search Report

;A2without Search Report)

Change: 890823 A2 Obligatory supplementary classification

(change)

Change: 890830 A2 Obligatory supplementary classification

(change)

Search Report: 890913 A3 Separate publication of the European or

International search report

Examination: 900502 A2 Date of filing of request for examination:

900302

Examination: 920930 A2 Date of despatch of first examination report:

920813

Grant: 970416 B1 Granted patent

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980114 B1 Representative (change)
LANGUAGE (Publication, Procedural, Application): English; English; English
FULLTEXT AVAILABILITY:
                          Update
                                   Word Count
Available Text Language
                                   2068
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     CLAIMS B (English) EPAB97
                                     1850
                                     1632
     CLAIMS B (German) EPAB97
      CLAIMS B (French) EPAB97
                                     2065
                                    13054
             (English) EPABF1
      SPEC A
               (English) EPAB97
                                    12811
     SPEC B
Total word count - document A
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                                    18358
Total word count - document B
Total word count - documents A + B 33481
            (Item 1 from file: 157)
 5/5/11
DIALOG(R) File 157: Aidsline(R)
format only 1997 The Dialog Corporation. All rts. reserv.
00017785 3125591 ICA7/3125591
   Conservation of a dominant epitope within the third variable
region of gp120.
 Boudet F; Theze J; Zouali M
  Institut Pasteur, Immunogenetique Cellulaire, 75015 Paris, France
  Int Conf AIDS (ITALY) Jun 16-21 1991, 7 (2) p155 (abstract no.
W.A.1255),
  Languages: ENGLISH
  Document Type: ABSTRACT
  Journal Announcement: 9112
  Subfile: INDEX MEDICUS
One of the targets of neutralizing antibodies to the human immunodeficiency virus, HIV-1, lies within the third {\bf variable}
region (V3) of the external envelope glycoprotein gp120. Initially,
it was found that this domain may be responsible for an isolate-restricted
neutralizing antibody response in infected individuals as well as in
experimentally immunized animals, that could be accounted for by the great
diversity of its amino acid sequence on both sides of a highly conserved
beta turn tetramer, GPGR. This region was referred to as the principal
neutralizing determinant (PND). More recent studies showed that the
sequence variability of the PND may not be as diverse as initially thought.
To probe the diversity of the human antibody response to this region we
evaluated the reactivity of 102 HIV-positive human sera with synthetic
peptides corresponding to the PND of 12 different virus isolates
(amino acid positions 303-324). The majority of the positive sera (75%)
reacted with the PND of more than 4 isolates, and the MN, SF2 and NY5
isolates were recurrently recognized. Inhibition assays using a human
serum with a broad immunoreactivity pattern showed that the binding to
multiple isolates of the PND could be partially inhibited by some of the
reactive synthetic peptides . In further studies, we determined the
binding specificities of goat and mouse sera generated against a recombinant protein of gp120, PB1, derived from the HIV IIIB isolate and
encompassing the neutralizing domain. We found that the immune sera reacted
with synthetic peptides of various HIV-1 isolates. These data,
together with recent evidence, support the view that this hypervariable
region may comprise a conserved motif able to induce an antibody response
to different HIV-1 isolates. The implications of this notion with regard to
vaccine strategies will be discussed.
 Tags: Animal; Human
 Descriptors: *Acquired Immunodeficiency Syndrome--Immunology--IM; *HIV-1
--Immunology--IM; *Peptide Fragments--Immunology--IM; Amino Acid Sequence;
            HIV Antibodies--Biosynthesis--BI; Neutralization
Peptides--Immunology--IM; Protein Conformation; Vaccines, Synthetic;
Viral Vaccines
                           (Epitopes); 0 (HIV envelope protein gp120
  CAS Registry No.: 0
(305-321)); 0 (HIV Antibodies); 0 (Peptide Fragments); 0 (Peptides);
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0 (Vaccines, Synthetic); 0 (Viral Vaccines)

(Item 2 from file: 157) DIALOG(R) File 157:Aidsline(R) format only 1997 The Dialog Corporation. All rts. reserv. ICA6/30027690 00016833 30027690 Neutralization epitopes on HIV-1 apparently include specificities outside variable region 3. Quinnan G; Vujcic L; Garrow E; Seamon K; Hendry RM CBER, FDA, Bethesda, Maryland, USA Int Conf AIDS (UNITED STATES) Jun 20-23 1990, 6 (3) p151 (abstract no. S.A.276), Languages: ENGLISH Document Type: ABSTRACT Journal Announcement: 9012 Subfile: INDEX MEDICUS OBJECTIVE: To determine whether neutralization of HIV-1 by human sera is mediated only by antibodies directed against variable region 3 (V3) epitopes. METHODS: Neutralizing antibodies (NA) were measured using a syncytial focus inhibition test employing the IIIB and MN strains of HIV-1. Synthetic peptides corresponding to the V3 region of IIIB and MN were prepared by automated solid phase synthesis, purified by high performance liquid chromatography and adapted for use as antigens in ELISA and for blocking assays. RESULTS: The NA titers of the 10 sera tested varied from 1:16 to 1:512 against the IIIB strain, and 1:3,200 to 1:512,000 against the MN strain. The IIIB and MN V3 peptides were bound by 4/10 and 10/10 sera, respectively, in ELISA. Titers ranged from 1:1,000 to 1:10,000 against IIIB peptide, and from 400 to 1:102, 400 against the MN peptide. Inhibition of NA against MN by addition of MN peptide to sera was complete in four, partial in five, and absent in one case. There was no significant correlation between MN and IIIB ELISA titers, between MN ELISA and NA titers, or between MN or IIIB ELISA or MN NA and degree of peptide blocking of MN NA. There was a strong correlation between NA titer against MN in the presence of optimal blocking concentrations of peptide and the NA titers of unblocked sera against IIIB. MN peptide did not block IIIB NA. CONCLUSIONS: The V3 domain is an important neutralization epitope on HIV-1, but a cross-reactive epitope exists which is commonly recognized and is apparently outside the V3 region. Tags: Human; Male Epitopes--Immunology--IM; \*HIV Envelope Descriptors: Protein gp120--Immunology--IM; \*HIV Infections--Immunology--IM; \*Immunoglobulin Variable Region--Immunology--IM; Binding Sites; Chimpansee troglodytes; Chromatography, High Pressure Liquid; Cross Viral; Cytopathogenic Effect, HIV-1--Immunology--IM; Reactions;

(Epitopes); 0 (HIV Envelope Protein gp120); 0

Neutralization Tests

CAS Registry No.: 0

(Immunoglobulin Variable Region)

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DIALOG(R) File 399:CA SEARCH(R)
(c) 1998 American Chemical Society. All rts. reserv.
               CA: 121(23)278377b
                                     CONFERENCE PROCEEDING
  Some synthetic peptides representing HIV-specific CTL epitopes fail to
induce CTL responses in vivo: implications for vaccine development
  AUTHOR(S): Sastry, Jagannadha K.; Nehete, Pramod; Casement, Kevin;
Arlinghaus, Ralph B.
  LOCATION: M. D. Anderson Cancer Cent., Univ. Texas, Houston, TX, 77030,
USA
  JOURNAL: Vaccines 94: Mod. Approaches New Vaccines Incl. Prev. AIDS,
(Annu. Meet.), 11th EDITOR: Norrby, Erling (Ed), DATE: 1994 PAGES:
175-80 CODEN: 60PMAJ LANGUAGE: English MEETING DATE: 930000 PUBLISHER:
Cold Spring Harbor Lab. Press, Cold Spring Harboy, N.Y
  SECTION:
CA215002 Immunochemistry
  IDENTIFIERS: HIV1 virus peptide cytolytic lymphocyte vaccine
  DESCRIPTORS:
Proteins, specific or class...
    synthetic peptides from virus-specific cytolytic T cell epitopes fail
    to induce specific response in vivo
Lymphocyte, T-cell, cytotoxic... Peptides, biological studies... Vaccines...
Virus, animal, human immunodeficiency 1...
    synthetic peptides representing HIV-specific cytolytic T cell epitopes
    fail to induce specific response in vivo
           (Item 2 from file: 399)
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DIALOG(R) File 399:CA SEARCH(R)
(c) 1998 American Chemical Society. All rts. reserv.
               CA: 119(17)179173j
  119179173
                                     PATENT
  Peptide compositions for eliciting cytotoxic T-lymphocyte responses
against viruses, including HIV
  INVENTOR (AUTHOR): Sastry, Jagannadha K.; Arlinghaus, Ralph B.;
Platsoucas, Chris D.; Nehete, Pramod N.
  LOCATION: USA
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ASSIGNEE: University of Texas System
  PATENT: PCT International; WO 9310816 Al DATE: 930610
 APPLICATION: WO 92US10378 (921202) *US 800932 (911202) *US 945865
(920916)
  PAGES: 130 pp. CODEN: PIXXD2 LANGUAGE: English CLASS: A61K-039/21A;
A61K-039/12B; C12Q-001/02B DESIGNATED COUNTRIES: AT; AU; BB; BG; BR; CA;
CH; CS; DE; DK; ES; FI; GB; HU; JP; KP; KR; LK; LU; MG; MN; MW; NL; NO; NZ;
PL; PT; RO; RU; SD; SE; UA DESIGNATED REGIONAL: AT; BE; CH; DE; DK; ES; FR
; GB; GR; IE; IT; LU; MC; NL; PT; SE; BF; BJ; CF; CG; CI; CM; GA; GN; ML;
MR; SN; TD; TG
  SECTION:
CA215002 Immunochemistry
  IDENTIFIERS: peptide cytotoxic T cell enhancement, vaccine HIV peptide,
antiviral peptide cytotoxic T cell
  DESCRIPTORS:
Peptides, biological studies...
    antiviral, with cytotoxic T-cell epitope and helper T-cell-inducing
    epitope or HIV infection-inhibiting sequence
Proteins, biological studies...
    cytotoxic T-cell-inducing peptide or helper T-cell-inducing peptide
    derived from, of HIV or influenza virus or sendai virus, for anti-viral
    compn.
Virus, animal, influenza... Virus, animal, Sendai...
    cytotoxic T-cell-inducing peptide or helper T-cell-inducing peptide
    derived from protein of, for antiviral compn.
Sialoglycoproteins, gp120env...
    cytotoxic T-cell-inducing peptide or helper T-cell-inducing peptide or
    HIV infection-inhibiting peptide derived from, of HIV, for anti-HIV
    compn.
Gene, microbial, env... Gene, microbial, gag... Gene, microbial, pol...
    cytotoxic T-cell-inducing peptide or helper T-cell-inducing peptide or
    HIV infection-inhibiting peptide derived from product of, of HIV, for
    anti-HIV compn.
Antibodies...
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    antiviral in relation to
Virus, animal, human immunodeficiency 1...
    gp120 V3 loop peptides effect on human cells infected with
Virus, animal, human immunodeficiency...
    infection with, inhibition of, peptides for
Gene, microbial...
    NEF, cytotoxic T-cell-inducing peptide or helper T-cell-inducing
    peptide or HIV infection-inhibiting peptide derived from product of, of
    HIV, for anti-HIV compn.
Molecular structure-biological activity relationship... Protein sequences
    of HIV infection-inhibiting peptides
Lymphocyte, T-cell, cytotoxic... Lymphocyte, T-cell, helper cell...
    peptide with epitope for induction of, for antiviral compn.
Glycoproteins, specific or class, gp160env...
    peptides derived from, antibody and T-cell response to, cytotoxic
    T-cell-inducing peptides for antiviral compns. in relation to
Vaccines...
    peptides inducing cytotoxic T-cell response for
Microorganism, pathogenic...
    protein assocd. with, cytotoxic T-cell response to, compn. inducing,
    screening of
  CAS REGISTRY NUMBERS:
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114991-28-5 124693-73-8 124693-74-9 125159-22-0 139502-07-1
    139502-09-3 139502-10-6 139502-11-7 139502-12-8 139502-13-9 139502-14-0 139502-15-1 146522-97-6 149600-23-7 149600-24-8 149600-25-9 149600-26-0 149600-27-1 amino acid sequence of,
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cytotoxic T-cell-inducing antiviral peptides in relation to

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   135540-41-9D 135540-42-0D 135540-43-1D 135540-44-2D 135540-45-3D
   135540-46-4D 135572-09-7D 135572-10-0D 149600-31-7D 149600-32-8D
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   products, amino acid sequence and antibody response of, cytotoxic
   T-cell-inducing anti-HIV compn. in relation to
114416-46-5 133531-91-6 for cytotoxic T-cell-inducing antiviral peptide
    compn.
           (Item 3 from file: 399)
DIALOG(R) File 399:CA SEARCH(R)
(c) 1998 American Chemical Society. All rts. reserv.
              CA: 117(23)225784t
                                    JOURNAL
 117225784
 Membrane-permeable dideoxyuridine 5'-monophosphate analog inhibits human
immunodeficiency virus infection
 AUTHOR(S): Sastry, Jagannadha K.; Nehete, Pramod N.; Khan, Saeed; Nowak,
Billie J.; Plunkett, William; Arlinghaus, Ralph B.; Farquhar, David
 LOCATION: M. D. Anderson Cancer Cent., Univ. Texas, Houston, TX, 77030,
USA
 JOURNAL: Mol. Pharmacol. DATE: 1992 VOLUME: 41 NUMBER: 3 PAGES: 441=5
 CODEN: MOPMA3 ISSN: 0026-895X LANGUAGE: English
 SECTION:
CA201005 Pharmacology
CA263XXX Pharmaceuticals
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Pharmaceutical dosage forms, prodrugs...
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    inhibition in relation to
Virucides and Virustats...
   dideoxyuridine monophosphate prodrug as, HIV inhibition by
Virus, animal, human immunodeficiency 1...
    infection with, treatment of, by membrane permeable dideoxyuridine
   monophosphate prodrug
Biological transport, permeation...
   of dideoxyuridine monophosphate prodrug, HIV inhibition in relation to
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117605-34-2 formation of, as dideoxyuridine monophosphate prodrug

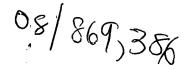
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                                     CONFERENCE PROCEEDING
  121278377
               CA: 121(23)278377b
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    to induce specific response in vivo
Lymphocyte, T-cell, cytotoxic... Peptides, biological studies... Vaccines...
Virus, animal, human immunodeficiency 1...
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    fail to induce specific response in vivo
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           (Item 2 from file: 399)
DIALOG(R) File 399:CA SEARCH(R)
(c) 1998 American Chemical Society. All rts. reserv.
               CA: 119(17)179173j
  119179173
                                     PATENT
  Peptide compositions for eliciting cytotoxic T-lymphocyte responses
against viruses, including HIV
  INVENTOR (AUTHOR): Sastry, Jagannadha K.; Arlinghaus, Ralph B.;
Platsoucas, Chris D.; Nehete, Pramod N.
  LOCATION: USA
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; GB; GR; IE; IT; LU; MC; NL; PT; SE; BF; BJ; CF; CG; CI; CM; GA; GN; ML;
MR; SN; TD; TG
  SECTION:
CA215002 Immunochemistry
  IDENTIFIERS: peptide cytotoxic T cell enhancement, vaccine HIV peptide,
antiviral peptide cytotoxic T cell
  DESCRIPTORS:
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    epitope or HIV infection-inhibiting sequence
Proteins, biological studies...
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    derived from, of HIV or influenza virus or sendai virus, for anti-viral
    compn.
Virus, animal, influenza... Virus, animal, Sendai...
    cytotoxic T-cell-inducing peptide or helper T-cell-inducing peptide
    derived from protein of, for antiviral compn.
Sialoglycoproteins, gp120env...
    cytotoxic T-cell-inducing peptide or helper T-cell-inducing peptide or
    HIV infection-inhibiting peptide derived from, of HIV, for anti-HIV
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Gene, microbial, env... Gene, microbial, gag... Gene, microbial, pol...
    cytotoxic T-cell-inducing peptide or helper T-cell-inducing peptide or
    HIV infection-inhibiting peptide derived from product of, of HIV, for
    anti-HIV compn.
Antibodies...
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    antiviral in relation to
Virus, animal, human immunodeficiency 1...
    qp120 V3 loop peptides effect on human cells infected with
Virus, animal, human immunodeficiency...
    infection with, inhibition of, peptides for
Gene, microbial...
    NEF, cytotoxic T-cell-inducing peptide or helper T-cell-inducing
    peptide or HIV infection-inhibiting peptide derived from product of, of
    HIV, for anti-HIV compn.
Molecular structure-biological activity relationship... Protein sequences
    of HIV infection-inhibiting peptides
Lymphocyte, T-cell, cytotoxic... Lymphocyte, T-cell, helper cell...
    peptide with epitope for induction of, for antiviral compn.
Glycoproteins, specific or class, gp160env...
    peptides derived from, antibody and T-cell response to, cytotoxic
    T-cell-inducing peptides for antiviral compns. in relation to
    peptides inducing cytotoxic T-cell response for
Microorganism, pathogenic...
    protein assocd. with, cytotoxic T-cell response to, compn. inducing,
    screening of
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    T-cell-inducing antiviral peptide compns. in relation to
114991-28-5 124693-73-8 124693-74-9 125159-22-0 139502-07-1
    139502-09-3 139502-10-6 139502-11-7 139502-12-8 139502-13-9
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    149600-25-9 149600-26-0 149600-27-1 amino acid sequence of,
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cytotoxic T-cell-inducing antiviral peptides in relation to

135540-27-1 as helper T-cell-inducing peptide, for anti-HIV compn. with cytotoxic T-cell-inducing peptide 135540-31-7D 135540-32-8D 135540-34-0D 135540-36-2D 135540-38-4D 135540-41-9D 135540-42-0D 135540-43-1D 135540-44-2D 135540-45-3D 135540-46-4D 135572-09-7D 135572-10-0D 149600-31-7D 149600-32-8D 149600-33-9D 149600-34-0D 149600-35-1D 149600-36-2D cysteine-linked multimers, amino acid sequence and antibody and T-cell response of, cytotoxic T-cell-inducing anti-HIV compn. in relation to 149600-37-3D 149600-38-4D 149600-39-5D 150375-16-9D fatty acid reaction products, amino acid sequence and antibody response of, cytotoxic T-cell-inducing anti-HIV compn. in relation to 114416-46-5 133531-91-6 for cytotoxic T-cell-inducing antiviral peptide compn. (Item 3 from file: 399) DIALOG(R) File 399:CA SEARCH(R) (c) 1998 American Chemical Society. All rts. reserv. CA: 117(23)225784t 117225784 JOURNAL Membrane-permeable dideoxyuridine 5'-monophosphate analog inhibits human immunodeficiency virus infection AUTHOR(S): Sastry, Jagannadha K.; Nehete, Pramod N.; Khan, Saeed; Nowak, Billie J.; Plunkett, William; Arlinghaus, Ralph B.; Farquhar, David LOCATION: M. D. Anderson Cancer Cent., Univ. Texas, Houston, TX, 77030, USA JOURNAL: Mol. Pharmacol. DATE: 1992 VOLUME: 41 NUMBER: 3 PAGES: 441=5 CODEN: MOPMA3 ISSN: 0026-895X LANGUAGE: English SECTION: CA201005 Pharmacology CA263XXX Pharmaceuticals IDENTIFIERS: dideoxyuridine prodrug HIV antiviral DESCRIPTORS: Pharmaceutical dosage forms, prodrugs... dideoxyuridine monophosphate analog as, membrane permeation by, HIV inhibition in relation to Virucides and Virustats... dideoxyuridine monophosphate prodrug as, HIV inhibition by Virus, animal, human immunodeficiency 1... infection with, treatment of, by membrane permeable dideoxyuridine monophosphate prodrug Biological transport, permeation... of dideoxyuridine monophosphate prodrug, HIV inhibition in relation to CAS REGISTRY NUMBERS: 144510-15-6 antiviral activity of, as dideoxyuridine monophosphate prodrug, HIV inhibition by 84445-38-5 144510-16-7 formation of, as dideoxyuridine monophosphate prodrug metabolite 117605-34-2 formation of, as dideoxyuridine monophosphate prodrug metabolite, HIV inhibition by



=> s envelope and 15

63331 ENVELOPE

L6 480 ENVELOPE AND L5

=> s peptides and 16

17046 PEPTIDES

L7 228 PEPTIDES AND L6

=> s variable(4w) region

308906 VARIABLE

394408 REGION

L8 1518 VARIABLE (4W) REGION

=> s 18 and 17

L9 41 L8 AND L7

=> d 19 ab cit 1-41

US PAT NO:

5,707,626 [IMAGE AVAILABLE]

L9: 1 of 41

#### ABSTRACT:

Therapeutic strategies for the treatment of immunoinfective cluster virus infections in humans involving the use of antibodies or fragments thereof which are characteristic of autoantibodies produced by patients affected with systemic rheumatic disorders and cross-react with epitopes on an immunoinfective cluster virus. Additional therapeutic strategies include the use U1 RNA or fragments thereof to treat said viral infections.

1. 5,707,626, Jan. 13, 1998, Methods of treating **HIV** infection using antibodies to the U2 small nuclear ribonuclear protein; Angeline Douvas, et al., 424/160.1, 148.1, 152.1, 172.1 [IMAGE AVAILABLE]

US PAT NO:

5,702,707 [IMAGE AVAILABLE]

L9: 2 of 41

## ABSTRACT:

A peptide of up to about 40 amino acids including the core sequence inclusive of amino acids at positions 92-109 of the p17 gag core protein of HIV-1, such as, Ile-Y.sub.1 -Y.sub.2 -Lys-Asp-Thr-Lys-Glu-Ala-Leu-Y.sub.3 -Lys-Ile-Glu-Glu-Glu-Gln-Asn

wherein

Y.sub.1 is Asp or Glu,

Y.sub.2 is Val or Ile, and

Y.sub.3 is Glu or Asp,

is effective in inhibiting replication of the **HIV** virus and provides the basis for a vaccine for treatment or prevention of AIDS.

2. 5,702,707, Dec. 30, 1997, Diagnostic **method** and test kit for the serological detection of the AIDS virus; Allan L. Goldstein, et al., 424/208.1, 204.1; 530/350 [IMAGE AVAILABLE]

US PAT NO:

5,698,390 [IMAGE AVAILABLE]

L9: 3 of 41

#### ABSTRACT:

A family of cDNA sequences derived from hepatitis C virus (HCV) are

provided. These sequences encode antigens which react immunologically with antibodies present in individuals with non-A non-B hepatitis (NANBH), but which are absent from individuals infected with hepatitis A virus, or hepatitis B virus, and also are absent in control individuals. The HCV cDNA sequences lack substantial homology to the sequences of hepatitis delta virus (HDV) and HBV. A comparison of the sequences of amino acids encoded in the HCV cDNA with the sequences of Flaviviruses indicates that HCV may be related to the Flaviviruses. The HCV cDNA sequences and the polypeptides encoded therein are useful as reagents for the detection and therapy of HCV. The reagents provided in the invention are also useful for the isolation of NANBH agent(s), for the propagation of these agents in tissue culture, and for the screening of antiviral agents for HCV.

3. 5,698,390, Dec. 16, 1997, Hepatitis C immunoassays; Michael Houghton, et al., 435/5; 436/518, 820 [IMAGE AVAILABLE]

US PAT NO:

5,693,752 [IMAGE AVAILABLE]

L9: 4 of 41

#### ABSTRACT:

This invention refers to **peptides** binding to antibodies that show neutralizing activity against different strains and clinical isolates of **HIV-1** and that inhibit the fusion of cells caused by **HIV-1**. These **peptides** are applied with an adjuvant, as recombinant fusion proteins, chemically coupled to carrier molecules, as recombinant chimeric viruses or as recombinant antibodies.

4. 5,693,752, Dec. 2, 1997, **Peptides** that induce antibodies which neutralize genetically divergent **HIV**-1 isolates; Hermann Katinger, et al., 530/329; 424/184.1, 188.1, 204.1, 208.1; 530/350 [IMAGE AVAILABLE]

US PAT NO:

5,691,135 [IMAGE AVAILABLE]

L9: 5 of 41

#### ABSTRACT:

VH3 and VH4 type immunoglobulins display superantigen-type binding affinity for the HIV gp120 envelope glycoprotein. VH3 and VH4 type antibody molecules, including IgG and IgM, are shown to suppress HIV infection in vivo and in vitro. Determining the level of such antibody molecules is correlated to the advancement of HIV disease state.

5. 5,691,135, Nov. 25, 1997, Immunoglobulin superantigen binding to gp 120 from **HIV**; Jonathan Braun, et al., 435/5, 7.1, 7.2, 7.24, 7.92, 974 [IMAGE AVAILABLE]

US PAT NO:

5,674,984 [IMAGE AVAILABLE]

L9: 6 of 41

# ABSTRACT:

Methods for producing and isolating unclipped **HIV** env proteins are provided. According to the methods, an antibody directed to an **HIV** epitope spanning the env clip site is used to selectively separate unclipped **HIV** env protein from clipped env protein.

6. 5,674,984, Oct. 7, 1997, Method for isolation of unclipped HIV envelope protein; Phillip W. Berman, et al., 530/413, 388.35, 412 [IMAGE AVAILABLE]

US PAT NO:

5,665,569 [IMAGE AVAILABLE]

L9: 7 of 41

# ABSTRACT:

The present invention provides monoclonal antibodies that are specifically immunoreactive with an HIV-1 gp120 protein or its precursor gp160 protein comprising the amino acid sequence set out in SEQ ID NO: 1, G-P-G-R, and characterized by their ability to neutralize, in vitro, the infection of H9 cells by live HIV-1 strains MN and

III. sub.B as determined by reverse transcriptase, p24, MT-2 and syncytium formation assays. Presently preferred antibody NM-01 isolated from mouse/mouse hybridoma ATCC HB 10726 is further characterized by its capacity to mediate complement-dependent virolysis of HIV-1 particles and antibody-dependent cellular cytotoxicity of HIV-1 infected cells. Antibodies consisting essentially of a human antibody variable region comprising a sequence of amino acids of at least one complementarity determining region of the monoclonal antibody produced by the hybridoma cell line ATCC HB 10726 are specifically disclosed. Pharmaceutical compositions of the invention are projected to be useful in the passive immunization treatment of animals, especially humans, susceptible to or infected with HIV-1.

7. 5,665,569, Sep. 9, 1997, **HIV** immunotherapeutics; Tsuneya Ohno, 435/69.6, 69.7, 252.3, 320.1; 536/23.4, 23.53 [IMAGE AVAILABLE]

US PAT NO: 5,665,536 [IMAGE AVAILABLE] L9: 8 of 41

#### ABSTRACT:

Vaccines effective in the inhibition of infection caused by the family of retroviruses, HTLV-III, Human T-Cell Leukemia Virus, LAV, Lymphadenopathy-associated virus, ARV-2, AIDS-Related Virus, (AIDS and AIDS-Related Complex) have been developed from an antisera prepared against thymosin .alpha..sub.1 (T.alpha..sub.1), a thymic hormone, as well as from antisera to synthetic peptide fragments of T.alpha..sub.1 and antisera to synthetic peptide fragments inclusive of amino acid positions 92-109 of the p17 gag core protein of HTLV-III, LAV and ARV-2. In this 18 amino acid primary sequence there is a 44 to 50% homology between the gag protein and T.alpha..sub.1. Immunoglobulin (IgG)-enriched preparations of the T.alpha..sub.1 antisera have enhanced activity in blocking vital replication. A diagnostic test capable of directly detecting the presence of HTLV-III, LAV, ARV-2 and related retroviruses associated with AIDS and ARC is also described.

8. 5,665,536, Sep. 9, 1997, Diagnastic **method** and test kit for the serological detection of the AIDS virus; Allan L. Goldstein, et al., 435/5, 7.1, 7.92, 7.93, 7.94, 7.95, 974, 975; 436/516; 530/324, 826 [IMAGE AVAILABLE]

US PAT NO: 5,665,355 [IMAGE AVAILABLE] L9: 9 of 41

# ABSTRACT:

The invention provides assays for the presence or absence of CD4+ T cell subpopulations carrying particular V.beta. components of the T cell receptor (TCR-V.beta.) in persons infected with HIV, including amplification of mRNA from T cells with primers specific to each TCR-V.beta. to detect the presence or absence of each TCR-V.beta. in a sample and primers for use in such amplification assays are disclosed. The invention also provides assays of antibody-containing fluids of a person infected with HIV to determine the immunodeficiency where the fluid is suspected to contain an antibody having a paratope specific to an epitope on a TCR-V.beta.. The invention also provides a binding agent specific to a paratope where the paratope is specific to an epitope on a TCR-V.beta.. The invention also provides a method of assay of the fluids of a person infected with HIV to determine the immunodeficiency of the person which utilizes a binding agent specific to complexes containing anti-TCR-V.beta. antibody bound to TCR-V.beta.. The invention also provides a method of treatment of a person infected with HIV to attenuate or avert immunodeficiency which utilize a binding agent that is homologous with an epitope on TCR-V.beta.. The invention also provides a method of treatment of a person infected with HIV to attenuate or avert immunodeficiency which involves removing an antibody capable of binding to an epitope on TCR-V.beta. from the blood of a person infected with HIV. Finally, the invention provides a method of vaccination of a person infected or at risk for infection with HIV which raises antiidiotypic antibodies specific to

free antibodies containing a paratope specific to an epitope on a TCR-V.beta..

9. 5,665,355, Sep. 9, 1997, Diagnosis and treatment of AIDS onset; Daniele Primi, 424/140.1, 160.1; 435/974 [IMAGE AVAILABLE]

US PAT NO:

5,658,569 [IMAGE AVAILABLE]

L9: 10 of 41

## ABSTRACT:

The disclosure relates to antibodies reactive with HIV-1 antigens and the use of such antibodies in vaccine preparations, immunotherapeutic preparations and assays for HIV-1.

10. 5,658,569, Aug. 19, 1997, Anti-**HIV**-1 neutralizing antibodies; Kurt B. Osther, et al., 424/148.1, 208.1; 530/388.85 [IMAGE AVAILABLE]

US PAT NO:

5,637,677 [IMAGE AVAILABLE]

L9: 11 of 41

#### ABSTRACT:

A method of constructing biologically active compounds which mimic the biological activity of the biologically active protein or which block the activity of the biologically active protein is disclosed. A method of identifying specific and discrete portions of pathogen antigens which either serve as epitopes for neutralizing antibodies or which are involved in pathogen binding to host cell receptors is disclosed. A method of constructing biologically active compounds which compete with cellular receptors for binding to either biologically active proteins or pathogen antigens is disclosed.

11. 5,637,677, Jun. 10, 1997, Biologically active compounds and methods of constructing and using the same; Mark I. Greene, et al., 530/333; 424/185.1; 435/7.1; 530/300, 350, 387.2, 388.22, 388.3 [IMAGE AVAILABLE]

US PAT NO:

5,631,137 [IMAGE AVAILABLE]

L9: 12 of 41

# ABSTRACT:

Disclosed and claimed are methods for selecting a recombinant virus, phage or cell expressing a catalytic antibody or catalytic portion thereof, or for selecting catalytic activity by a moiety. The method employs reaction-based selection for catalytic activity. The method can also be used to concentrate (increase the proportion of catalytic to non-catalytic moieties) a sample containing a catalytic moiety or viruses, phages or cells expressing a catalytic moiety. The selection or concentrating can be by employing a mechanism-based inhibitor, catalysis-accelerated movement, surface binding, changes in enthalpic component of binding as a function of temperature, or changes in binding by competition, or combinations thereof. The invention also comprehends a method for producing a recombinant virus or a cell-line expressing a catalytic moiety such as a catalytic antibody or catalytic portion thereof; and, this method can include infecting a suitable host with viruses which are screened for the expression. In addition, recombinant viruses and cell-lines so expressing a catalytic moiety such as a catalytic antibody or catalytic portion thereof are also disclosed and claimed.

12. 5,631,137, May 20, 1997, Reaction-based selection for expression of and concentration of catalytic moieties; Mark T. Martin, et al., 435/7.6, 7.4 [IMAGE AVAILABLE]

US PAT NO:

5,629,192 [IMAGE AVAILABLE]

L9: 13 of 41

## ABSTRACT:

The present invention relates, in general, to methods for reducing cell tumorigenicity. More particularly, the present invention provides a **method** for reducing cell tumorigenicity comprising transfecting a tumor cell with an ETS1 gene, the tumor cell not endogenously expressing

the ETS1 gene. In addition, the present invention provides a **method** for reducing cell tumorigenicity comprising contacting a tumor cell with a peptide expressed by an ETS1 gene, the tumor cell not endogenously expressing the ETSI gene. The methods of the present invention are particularly useful for reducing tumorigenicity in epithelial tumor cells.

13. 5,629,192, May 13, 1997, ETS1 gene: a human tumor suppressor gene; Hiroaki Suzuki, et al., 435/172.3; 514/44; 536/23.5; 935/62 [IMAGE AVAILABLE]

US PAT NO: 5,618,922 [IMAGE AVAILABLE] L9: 14 of 41

#### ABSTRACT:

The present invention provides a monoclonal antibody, designated NM03, which specifically binds HIV-1 gp 120.

14. 5,618,922, Apr. 8, 1997, NM03 antibody materials and methods; Tsuneya Ohno, et al., 530/388.35; 424/148.1; 435/331, 339.1; 530/387.9 [IMAGE AVAILABLE]

US PAT NO: 5,603,933 [IMAGE AVAILABLE] L9: 15 of 41

## ABSTRACT:

Disclosed are compositions and methods for use in viral binding and inactivation and in protecting cells from viral infection, particularly, for use in protecting target human CD4.sup.+ cells from infection by HIV. Peptides including short sequences from CD4 are identified as being particularly effective at binding to gp120 and inhibiting or reducing HIV infection of human CD4.sup.+ cells by steric hinderance or catalytic inactivation of gp120. The invention thus encompasses improved CD4-based peptide compositions and therapeutic formulations with viral binding and HIV-inhibitory activity.

15. 5,603,933, Feb. 18, 1997, CD4 **peptides** for binding to viral **envelope** proteins; Victor A. Dwyer, IV, et al., 424/185.1; 435/5; 514/15, 16, 17, 18; 530/328, 329, 330, 402 [IMAGE AVAILABLE]

US PAT NO: 5,593,972 [IMAGE AVAILABLE] L9: 16 of 41

# ABSTRACT:

Methods of prophylactic and therapeutic immunization of an individual against pathogen infection, diseases associated with hyperproliferative cells and autoimmune diseases are disclosed. The methods comprise the steps of administering to cells of an individual, a nucleic acid molecule that comprises a nucleotide sequence that encodes a protein which comprises at least one epitope that is identical or substantially similar to an epitope of a pathogen antigen, a hyperproliferative cell associated protein or a protein associated with autoimmune disease respectively. In each case, nucleotide sequence is operably linked to regulatory sequences to enable expression in the cells. The nucleic acid molecule is free of viral particles and capable of being expressed in said cells. The cells may be contacted cells with a cell stimulating agent. Methods of prophylactically and therapeutically immunizing an individual against HIV are disclosed. Pharmaceutical compositions and kits for practicing methods of the present invention are disclosed.

16. 5,593,972, Jan. 14, 1997, Genetic immunization; David B. Weiner, et al., 514/44; 424/278.1; 514/615, 818 [IMAGE AVAILABLE]

US PAT NO: 5,571,698 [IMAGE AVAILABLE] L9: 17 of 41

# ABSTRACT:

In order to obtain a novel binding protein against a chosen target, DNA molecules, each encoding a protein comprising one of a family of similar potential binding domains and a structural signal calling for the display

of the protein on the outer surface of a chosen bacterial cell, bacterial spore or phage (genetic package) are introduced into a genetic package. The protein is expressed and the potential binding domain is displayed on the outer surface of the package. The cells or viruses bearing the binding domains which recognize the target molecule are isolated and amplified. The successful binding domains are then characterized. One or more of these successful binding domains is used as a model for the design of a new family of potential binding domains, and the process is repeated until a novel binding domain having a desired affinity for the target molecule is obtained. In one embodiment, the first family of potential binding domains is related to bovine pancreatic trypsin inhibitor, the genetic package is M13 phage, and the protein includes the outer surface transport signal of the M13 gene III protein.

17. 5,571,698, Nov. 5, 1996, Directed evolution of novel binding proteins; Robert C. Ladner, et al., 435/69.7, 6, 69.1, 172.3, 252.3, 320.1 [IMAGE AVAILABLE]

US PAT NO: 5,567,584 [IMAGE AVAILABLE] L9: 18 of 41

#### ABSTRACT:

Methods for producing secreted receptor analogs and biologically active peptide dimers are disclosed. The methods for producing secreted receptor analogs and biologically active peptide dimers utilize a DNA sequence encoding a receptor analog or a peptide requiring dimerization for biological activity joined to a dimerizing protein. The receptor analog includes a ligand-binding domain. Polypeptides comprising essentially the extracellular domain of a human PDGF receptor fused to dimerizing proteins, the portion being capable of binding human PDGF or an isoform thereof, are also disclosed. The polypeptides may be used within methods for determining the presence of and for purifying human PDGF or isoforms thereof.

18. 5,567,584, Oct. 22, 1996, Methods of using biologically active dimerized polypeptide fusions to detect PDGF; Andrzej Z. Sledziewski, et al., 435/6, 7.1, 69.7; 436/501; 536/23.4 [IMAGE AVAILABLE]

US PAT NO: 5,565,332 [IMAGE AVAILABLE] L9: 19 of 41

# ABSTRACT:

Methods are disclosed which may be used for the production of antibodies, or antibody fragments, which have the same binding specificity as a parent antibody but which have increased human characteristics. Humanized antibodies may be obtained by chain shuffling, perhaps using phage display technology. In one embodiment, a polypeptide comprising a heavy or light chain variable domain of a non-human antibody specific for an antigen of interest is combined with a repertoire of human complementary (light or heavy) chain variable domains. Hybrid pairings which are specific for the antigen of interest are selected. Human chains from the selected pairings may then be combined with a repertoire of human complementary variable domains (heavy or light) and humanized antibody polypeptide dimers can then be selected for binding specificity for antigen. The methods may be combined with CDR-imprinting. In another embodiment, component part of an antigen-binding site of a no-human antibody known to bind a particular antigen is combined with a repertoire of component parts of an antigen-binding site of human antibody, forming a library of antibody polypeptide dimers with antigen-binding sites. Hybrids selected from this library may be used in a second humanizing shuffling step, or may already be of sufficient human character to be of value, perhaps after some modification to increase human character still further.

19. 5,565,332, Oct. 15, 1996, Production of chimeric antibodies - a combinatorial approach; Hendricus R. J. M. Hoogenboom, et al., 435/69.1, 5, 69.7, 69.8, 91.1, 235.1, 252.3, 252.33, 320.1; 530/387.1, 387.3, 867;

US PAT NO: 5,558,865 [IMAGE AVAILABLE] L9: 20 of 41

#### ABSTRACT:

The present invention provides monoclonal antibodies that are specifically immunoreactive with an HIV-1 gp120 protein or its precursor gp160 protein comprising the amino acid sequence set out in SEQ ID NO: 1, G-P-G-R, and characterized by their ability to neutralize, in vitro, the infection of H9 cells by live HIV-1 strains MN and III.sub.B as determined by reverse transcriptase, p24, MT-2 and syncytium formation assays. Presently preferred antibody NM-01 isolated from mouse/mouse hybridoma ATCC HB 10726 is further characterized by its capacity to mediate complement-dependent virolysis of HIV-1 particles and antibody-dependent cellular cytotoxicity of HIV-1 infected cells. Antibodies consisting essentially of a human antibody variable region comprising a sequence of amino acids of at least one complementarity determining region of the monoclonal antibody produced by the hybridoma cell line ATCC HB 10726 are specifically disclosed. Pharmaceutical compositions of the invention are projected to be useful in the passive immunization treatment of animals, especially humans, susceptible to or infected with HIV-1.

20. 5,558,865, Sep. 24, 1996, **HIV** immunotherapeutics; **Tsuneya Ohno**, 424/148.1, 130.1, 139.1, 141.1; 435/339.1; 530/387.1, 387.9, 388.1, 388.35 [IMAGE AVAILABLE]

US PAT NO: 5,543,391 [IMAGE AVAILABLE] L9: 21 of 41

#### ABSTRACT:

This invention provides novel methods and reagents for specifically delivering biologically active compounds to phagocytic mammalian cells. The invention also relates to specific uptake of such biologically active compounds by phagocytic cells and delivery of such compounds to specific sites intracellularly. The invention specifically relates to methods of facilitating the entry of antimicrobial drugs and other agents into phagocytic cells and for targeting such compounds to specific organelles within the cell. The invention specifically provides compositions of matter and pharmaceutical embodiments of such compositions comprising conjugates of such antimicrobial drugs and agents covalently linked to particulate carriers generally termed microparticles. In particular embodiments, the antimicrobial drug is covalently linked to a microparticle via an organic linker molecule which is the target of a microorganism-specific protein having enzymatic activity. Thus, the invention provides cell targeting of drugs wherein the targeted drug is only released in cells infected with a particular microorganism. Alternative embodiments of such specific drug delivery compositions also contain polar lipid carrier molecules effective in achieving intracellular organelle targeting in infected phagocytic mammalian cells. Particular embodiments of such conjugates comprise antimicrobial drugs covalently linked both to a microparticle via an organic linker molecule and to a polar lipid compound, to facilitate targeting of such drugs to particular subcellular organelles within the cell. Also provided are porous microparticles impregnated with antimicrobial drugs and agents wherein the surface or outside extent of the microparticle is covered with a degradable coating that is specifically degraded within an infected phagocytic mammalian cell. Methods of inhibiting, attenuating, arresting, combatting and overcoming microbial infection of phagocytic mammalian cells in vivo and in vitro are also provided.

21. 5,543,391, Aug. 6, 1996, Covalent microparticle-drug conjugates for biological targeting; Milton B. Yatvin, et al., 514/2; 424/450; 514/78; 530/300, 329, 331; 536/21, 51 [IMAGE AVAILABLE]

US PAT NO: 5,543,390 [IMAGE AVAILABLE] L9: 22 of 41

## ABSTRACT:

This invention provides novel methods and reagents for specifically delivering biologically active compounds to phagocytic mammalian cells. The invention also relates to specific uptake of such biologically active compounds by phagocytic cells and delivery of such compounds to specific sites intracellularly. The invention specifically relates to methods of facilitating the entry of antimicrobial drugs and other agents into phagocytic cells and for targeting such compounds to specific organelles within the cell. The invention specifically provides compositions of matter and pharmaceutical embodiments of such compositions comprising conjugates of such antimicrobial drugs and agents covalently linked to particulate carriers generally termed microparticles. In particular embodiments, the antimicrobial drug is covalently linked to a microparticle via an organic linker molecule which is the target of a microorganism-specific protein having enzymatic activity. Thus, the invention provides cell targeting of drugs wherein the targeted drug is only released in cells infected with a particular microorganism. Alternative embodiments of such specific drug delivery compositions also contain polar lipid carrier molecules effective in achieving intracellular organelle targeting in infected phagocytic mammalian cells. Particular embodiments of such conjugates comprise antimicrobial drugs covalently linked both to a microparticle via an organic linker molecule and to a polar lipid compound, to facilitate targeting of such drugs to particular subcellular organelles within the cell. Also provided are porous microparticles impregnated with antimicrobial drugs and agents wherein the surface or outside extent of the microparticle is covered with a degradable coating that is specifically degraded within an infected phagocytic mammalian cell. Methods of inhibiting, attenuating, arresting, combatting and overcoming microbial infection of phagocytic mammalian cells in vivo and in vitro are also provided.

22. 5,543,390, Aug. 6, 1996, Covalent microparticle-drug conjugates for biological targeting; Milton B. Yatvin, et al., 514/2; 424/450; 530/300, 329, 331; 536/28.2, 51, 78 [IMAGE AVAILABLE]

US PAT NO: 5,532,214 [IMAGE AVAILABLE] L9: 23 of 41

#### ABSTRACT:

A new protein, termed TAP 29, obtainable from the root tuber of the plant Trichosanthes kirilowii or produced by recombinant means is useful for treating HIV infections or tumors. In treating HIV infections, the protein is administered alone or in conjunction with conventional AIDS therapies. Also provided are processes for purifying the protein, DNA sequences encoding the protein, hosts expressing the protein, recombinant DNA methods for expressing the protein, and antibodies specific for the protein.

23. 5,532,214, Jul. 2, 1996, Anti-HIV protein, TAP 29, from tricosanthes, DNA coding therefor and therapeutic uses thereof; Sylvia Lee-Huang, et al., 514/2; 530/370 [IMAGE AVAILABLE]

US PAT NO: 5,529,776 [IMAGE AVAILABLE] L9: 24 of 41

# ABSTRACT:

The disclosure relates to antibodies reactive with **HIV-1** antigens and the use of such antibodies in vaccine preparations, immunotherapeutic preparations and assays for **HIV-1**.

24. 5,529,776, Jun. 25, 1996, Anti-HIV-1 neutralizing antibodies; Kurt B. Osther, et al., 424/160.1; 530/389.4 [IMAGE AVAILABLE]

US PAT NO: 5,484,889 [IMAGE AVAILABLE] L9: 25 of 41

# ABSTRACT:

A protein, in particular MAP 30, obtainable from both the fruit and seeds of Momordica charantia or produced by recombinant means useful for

treating tumors and HIV infections is disclosed. In treating HIV infections, the protein is administered alone or in conjunction with conventional AIDS therapies. Also provided are processes for purifying the protein, DNA sequences encoding the protein, and recombinant DNA methods for expressing the protein.

25. 5,484,889, Jan. 16, 1996, Plant protein useful for treating tumors and **HIV** infection; Sylvia Lee-Huang, et al., 530/379, 370 [IMAGE AVAILABLE]

US PAT NO: 5,422,274 [IMAGE AVAILABLE] L9: 26 of 41

# ABSTRACT:

This invention provides a therapeutic agent capable of specifically forming a complex with human immunodeficiency virus envelope glycoprotein which comprises a polypeptide. In one embodiment of the invention, the amino acid sequence of the polypeptide has the amino acid sequence shown in FIG. 6 from about +1 to about +185 fused to the amino acid sequence from about +353 to about +371. In another embodiment of the invention, the amino acid sequence of the polypeptide has the amino acid sequence shown in FIG. 6 from about +1 to about +106 fused to the amino acid sequence from about +353 to about +371. In yet a further embodiment of the invention, the amino acid sequence of the polypeptide has the amino acid sequence shown in FIG. 6 from about +1 to about +185. This invention also provides a method for treating a subject infected with a human immunodeficiency virus. The method treats the subject with an effective amount of a pharmaceutical composition having an effective amount of a therapeutic agent of the invention and a pharmaceutically acceptable carrier.

26. 5,422,274, Jun. 6, 1995, Internal deletion mutants of soluble T4(CD4); Paul J. Maddon, et al., 435/320.1; 424/188.1, 208.1; 435/69.4, 69.6, 172.3; 530/388.35; 536/23.1 [IMAGE AVAILABLE]

US PAT NO: 5,420,264 [IMAGE AVAILABLE] L9: 27 of 41

# ABSTRACT:

The present invention relates, in general, to substantially pure polynucleotide molecules specifying chimpanzee or rhesus monkey CD4, and fragments thereof and Gp120 binding molecules related to human CD4. The present invention further relates to polynucleotide molecules specifying CD4 fusion proteins and host cells containing the polynucleotide molecules.

27. 5,420,264, May 30, 1995, Non-human primate CD4 polypeptides, human CD4 molecules capable of glycosylation, fragments thereof, fusion proteins thereof, genetic sequences thereof, and the use thereof; Brian Seed, et al., 435/365, 243, 252.3, 320.1; 536/23.1, 23.4, 23.5, 23.53; 935/1, 11, 22 [IMAGE AVAILABLE]

US PAT NO: 5,350,671 [IMAGE AVAILABLE] L9: 28 of 41

# ABSTRACT:

Immunoassays for the detection of antibodies to HCV are provided which employ "C" domain antigens. Immunoassay kits comprising such antigens are also provided.

28. 5,350,671, Sep. 27, 1994, HCV immunoassays employing C domain antigens; Michael Houghton, et al., 435/5, 6, 975; 436/512, 518; 530/300, 326, 327, 328, 812, 826; 930/220, 223 [IMAGE AVAILABLE]

US PAT NO: 5,317,009 [IMAGE AVAILABLE] L9: 29 of 41

## ABSTRACT:

New proteins, termed GAP 31, obtainable from the seeds of Gelonium multiflorum, and DAP 30 and DAP 32, obtainable from the leaves or seeds

of Dianthus caryophyllus, or the above proteins produced by recombinant means, are useful for treating HIV infections. In treating HIV infections, the protein is administered alone or in conjunction with other anti-HIV therapeutics. Also provided are processes for purifying the proteins, DNA sequences encoding the proteins, hosts expressing the proteins, recombinant DNA methods for expressing the proteins, and antibodies specific for the proteins.

29. 5,317,009, May 31, 1994, Anti-HIV proteins GAP 31, DAP 30 and DAP 32 and therapeutic uses thereof; Sylvia Lee-Huang, et al., 514/8, 12, 885; 530/370, 377, 387.1, 395 [IMAGE AVAILABLE]

US PAT NO: 5,266,478 [IMAGE AVAILABLE] L9: 30 of 41

#### ABSTRACT:

Disclosed are monoclonal antibodies and related products which bind to the second variable region of HIV-1 gp120 and synthetic peptides and anti-idiotypic antibodies which induce endogenous production of antibodies with these same properties.

30. 5,266,478, Nov. 30, 1993, Antibodies which target a neutralization site within the second variable region of human immunodeficiency virus type 1 gp120; Tse W. Chang, et al., 435/328; 530/327, 387.1, 387.3, 387.9, 388.35, 391.3 [IMAGE AVAILABLE]

US PAT NO: 5,245,015 [IMAGE AVAILABLE] L9: 31 of 41

#### ABSTRACT:

The monoclonal antibodies (mAbs) of the invention bind to a neutralizing epitope on the gp120 glycoprotein of HIV-1. The binding seems to be conformation-dependent, in the sense that altering the conformation of gp120 (by deglycosylating the gp120, by reducing the cysteine bonds in the peptide backbone) will inhibit the binding. The mAbs of the invention are group specific and can neutralize different strains and different isolates of HIV-1. The binding of these mAbs to gp120 is enhanced by the binding of other antibodies to the principal neutralizing determinant (amino acid residue numbers 296-331) of gp120.

31. 5,245,015, Sep. 14, 1993, Monoclonal antibodies which neutralize HIV-1 through reaction with a conformational epitope in vitro; Michael S. C. Fung, et al., 530/388.35; 424/148.1; 435/69.6, 172.2, 339.1; 530/388.3, 389.4, 809, 866; 536/23.53; 935/15, 95 [IMAGE AVAILABLE]

US PAT NO: 5,234,905 [IMAGE AVAILABLE] L9: 32 of 41

## ABSTRACT:

A method for extending soluble CD4 serum half-life in mammals is described. The method comprises modifying soluble CD4 glycosylation so as to inhibit clearance from serum. In a preferred embodiment, clearance by hepatocyte galactose receptors is inhibited by removal of soluble CD4 terminal sialic residues followed by oxidation of exposed galactose residues. The modified soluble CD4 molecules are demonstrated to possess extended serum half-life.

32. 5,234,905, Aug. 10, 1993, Soluble CD4 molecules modified to prolong circulating half-life; J. Fred Kolhouse, et al., 514/8; 530/350, 395, 402 [IMAGE AVAILABLE]

US PAT NO: 5,227,159 [IMAGE AVAILABLE] L9: 33 of 41

# ABSTRACT:

B-cell lymphomas express surface immunoglobulin (immunoglobulin) containing unique idiotypic (idiotype) determinants which may be exploited as tumor specific markers. The inventor has produced murine monoclonal antibodies (MAbs) reactive with the idiotype marker derived

from 67 patients with low grade, follicular, small cleaved cell lymphoma. Out of 199 monoclonal antibodies, 47 (24%) were found to react with pooled normal human serum immunoglobulin in concentrations ranging from 0.6 .mu.g/ml to 160 .mu.g/ml. Of these 40 monoclonal antibodies, 90% cross-reacted with idiotype present in normal serum in levels <50 .mu.g/ml. Thirty-two of these anti-idiotypes were directed against a shared idiotope expressed on another patient's lymphoma cells. The frequency of shared idiotope expression defined by each antibody ranged from 0.26% to 3.9% of the B-cell lymphomas tested. A panel of five anti-idiotype antibodies reacted with 80% of AIDS associated lymphomas. Based on the reactivity with these monoclonal antibodies, tumors could be grouped into distinct families. In aggregate, these 32 monoclonal antibodies reacted with a total of 108 of 332 B cell lymphoma cases (32.5%), including 35 of 116 follicular, small cleaved cell lymphomas (30%). Many of these anti-shared idiotopes reacted with more than one histopathologic subtype of lymphoma. Anti-idiotypes have been used in B-cell lymphoma diagnosis and therapy. Moreover, applicant has discovered at least seven anti-shared idiotype antibodies that cross react with autoantibodies, e.g., 16.6 and RF. The development of a library of anti-idiotypes reactive with shared idiotopes should facilitate these clinical studies by obviating the need to develop a customized hybridoma for each patient.

33. 5,227,159, Jul. 13, 1993, Anti-idiotype antibodies reactive with shared idiotopes expressed by B cell lymphomas and autoantibodies; Richard A. Miller, 424/131.1, 153.1; 435/70.21, 172.2; 530/387.2, 388.73, 388.8; 935/104, 107 [IMAGE AVAILABLE]

US PAT NO: 5,223,409 [IMAGE AVAILABLE] L9: 34 of 41

#### ABSTRACT:

In order to obtain a novel binding protein against a chosen target, DNA molecules, each encoding a protein comprising one of a family of similar potential binding domains and a structural signal calling for the display of the protein on the outer surface of a chosen bacterial cell, bacterial spore or phage (genetic package) are introduced into a genetic package. The protein is expressed and the potential binding domain is displayed on the outer surface of the package. The cells or viruses bearing the binding domains which recognize the target molecule are isolated and amplified. The successful binding domains are then characterized. One or more of these successful binding domains is used as a model for the design of a new family of potential binding domains, and the process is repeated until a novel binding domain having a desired affinity for the target molecule is obtained. In one embodiment, the first family of potential binding domains is related to bovine pancreatic trypsin inhibitor, the genetic package is M13 phage, and the protein includes the outer surface transport signal of the M13 gene III protein.

34. 5,223,409, Jun. 29, 1993, Directed evolution of novel binding proteins; Robert C. Ladner, et al., 435/69.7, 5, 69.1, 172.3, 252.3, 320.1; 530/387.3, 387.5 [IMAGE AVAILABLE]

US PAT NO: 5,166,050 [IMAGE AVAILABLE] L9: 35 of 41

## ABSTRACT:

Methods and composition for HIV diagnosis and treatment using monoclonal antibodies reactive with one or more neutralizing regions of HIV proteins, using the peptides or homologs thereof from that region, and using related nucleic acid segments. Exemplary neutralizing regions include selected portions of the env and gag genes from various HIV isolates. Monoclonal antibody secreting cell lines include HIV-gp110-1, -2, -3, -4, -5 and -6 (A.T.C.C. Accession Nos. HB9175, HB9176, HB9177, HV9405, HB9406 and HB9404, respectively) and HIV-p25-2, -3, -6 and -7 (A.T.C.C. Accession Nos. HB9407, HB9408, HB9409 and HB9410, respectively).

35. 5,166,050, Nov. 24, 1992, Monoclonal antibodies and **peptides** useful in treating and diagnosing **HIV** infections; Mary K. Shriver, et al., 435/5; 424/139.1, 148.1, 188.1, 208.1; 435/70.21, 172.2, 339.1; 530/388.1, 388.35, 389.4, 864, 868 [IMAGE AVAILABLE]

US PAT NO: 5,155,027 [IMAGE AVAILABLE] L9: 36 of 41

#### ABSTRACT:

Methods for producing secreted receptor analogs and biologically active peptide dimers are disclosed. The methods for producing secreted receptor analogs and biologically active peptide dimers utilize a DNA sequence encoding a receptor analog or a peptide requiring dimerization for biological activity joined to a dimerizing protein. The receptor analog includes a ligand-binding domain. Polypeptides comprising essentially the extracellular domain of a human PDGF receptor fused to dimerizing proteins, the portion being capable of binding human PDGF or an isoform thereof, are also disclosed. The polypeptides may be used within methods for determining the presence of and for purifying human PDGF or isoforms thereof.

36. 5,155,027, Oct. 13, 1992, Method of producing secreted receptor analogs and biologically active peptide dimers; Andrzej Z. Sledziewski, et al., 435/69.7, 172.3; 530/350, 388.22, 389.3 [IMAGE AVAILABLE]

US PAT NO: 5,126,433 [IMAGE AVAILABLE] L9: 37 of 41

#### ABSTRACT:

A single-stranded nucleic acid molecule which encodes an amino acid sequence comprising at least a portion of a T4 glycoprotein is provided. Additionally, amino acid sequences which comprise at least a portion of a T4 glycoprotein and are useful as a prophylaxis for treating a subject with acquired immune deficiency syndrome are provided. These amino acid sequences, are capable of specifically forming a complex with a human immunodeficiency virus envelope glycoprotein and which are soluble in an aqueous solution. Monoclonal antibodies directed to the water-soluble amino acid sequences of the present invention may be used as vaccines for immunizing a subject against acquired immune deficiency syndrome.

37. 5,126,433, Jun. 30, 1992, Soluble forms of the T cell surface protein CD4; Paul J. Maddon, et al., 530/395, 350, 380, 387.2, 387.9, 389.1 [IMAGE AVAILABLE]

US PAT NO: 5,110,906 [IMAGE AVAILABLE] L9: 38 of 41

# ABSTRACT:

This invention provides a therapeutic agent capable of specifically forming a complex with human immunodeficiency virus **envelope** glycoprotein which comprises a polypeptide. In one embodiment of the invention, the amino acid sequence of the polypeptide comprises the amino acid sequence shown in FIG. 6 from about +1 to about +185 fused to the amino acid sequence from about +353 to about +371. In another embodiment of the invention, the amino acid sequence of the polypeptide comprises the amino acid sequence shown in FIG. 6 from about +1 to about +106 fused to the amino acid sequence from about +353 to about +371. In yet a further embodiment of the invention, the amino acid sequence of the polypeptide comprises the amino acid sequence shown in FIG. 6 from about +1 to about +185.

This invention also provides a **method** for treating a subject infected with a human immunodeficiency virus. The **method** comprises administering to the subject an effective amount of a pharmaceutical composition comprising an effective amount of a therapeutic agent of the invention and a pharmaceutically acceptable carrier.

38. 5,110,906, May 5, 1992, Derivatives of soluble T-4; Paul J. Maddon, et al., 530/350; 435/5, 974; 530/395, 821; 930/221 [IMAGE AVAILABLE]

US PAT NO: 5,019,384 [IMAGE AVAILABLE] L9: 39 of 41

## ABSTRACT:

Novel methods or compositions are provided for modulating the immune system, so as to be able to selectively stimulate or inactivate lymphocytes in relation to a particular transplantation antigen content. Particularly, mixtures may be employed associated with the more common transplantation antigens of a host population. In this manner, a large number of people can be treated, for example, by immunization, stimulation of particular T-cells or B-cells in relation to a pathogenic invasion of other aberrant state, e.g. neoplasia, treatment of autoimmune diseases, and the like. Particularly, the compositions may involve an oligopeptide involving as a first region a consensus sequence and an epitope or the first region may be joined to a second region comprising an antibody target sequence which is capable of competing with an epitopic site of an antigen of interest.

39. 5,019,384, May 28, 1991, Immunonodulating compositions and their use; Malcolm L. Gefter, et al., 424/184.1, 185.1, 186.1, 190.1, 204.1, 234.1, 265.1, 272.1 [IMAGE AVAILABLE]

US PAT NO: 4,983,387 [IMAGE AVAILABLE] L9: 40 of 41

#### ABSTRACT:

Vaccines effective in the inhibition of infection caused by the family of retroviruses, HTLV-III, Human T-Cell Leukemia Virus, LAV, Lymphadenopathy-associated virus, ARV-2, AIDS-Related Virus, (AIDS and AIDS-Related Complex) have been developed from an antisera prepared against thymosin .alpha..sub.1 (T.alpha..sub.1), a thymic hormone, as well as from antisera to synthetic peptide fragments of T.alpha..sub.1 and antisera to synthetic peptide inclusive of amino acid positions 92-109 of the p17 gag core protein of HTLV-III, LAV and ARV-2. In this 18 amino acid primary sequence that is a 44 to 50% homology between the gag protein and T.alpha..sub.1. Immunoglobulin (IgG) - enriched preparations of the T.alpha..sub.1 antisera have enhanced activity in blocking viral replication. A diagnostic test capable of directly detecting the presence of HTLV-III, LAV, ARV-2 and related retroviruses associated with AIDS and ARC is also described.

40. 4,983,387, Jan. 8, 1991, **HIV** related **peptides**, immunogenic antigens, and use therefor as subunit vaccine for AIDS virus; Allan Goldstein, et al., 424/188.1, 196.11, 208.1; 530/324, 325, 326, 345, 388.23, 389.2, 403, 806, 807; 930/221 [IMAGE AVAILABLE]

US PAT NO: 4,870,023 [IMAGE AVAILABLE] L9: 41 of 41

#### ABSTRACT:

The present invention is directed to recombinant baculoviruses which encode fusion polyhedrin proteins capable of forming occlusion bodies containing foreign peptides. The recombinant baculoviruses of the invention are formed by insertion into or replacement of regions of the polyhedrin gene that are not essential for occlusion body formation, with foreign DNA fragments by recombinant DNA techniques. The recombinant occlusion bodies produced in accordance with the present invention have uses in vaccine formulations, immunoassays, immobilized enzyme reactions, as biological insecticides, and as expression vectors.

41. 4,870,023, Sep. 26, 1989, Recombinant baculovirus occlusion bodies in vaccines and biological insecticides; Malcolm J. Fraser, et al., 435/235.1, 69.3, 69.7, 172.3, 243, 320.1; 530/350, 820, 826; 536/23.1, 23.4; 930/10, 220; 935/32, 57, 70 [IMAGE AVAILABLE]

2 SASUGA, MASUMI/IN

E12 USPAT 1 SASUGA, MITSUO/IN

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L10 1 "SASTRY, JAGANNADA K"/IN

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US PAT NO: 5,603,933 [IMAGE AVAILABLE] L10: 1 of 1

## ABSTRACT:

Disclosed are compositions and methods for use in viral binding and inactivation and in protecting cells from viral infection, particularly, for use in protecting target human CD4.sup.+ cells from infection by HIV. Peptides including short sequences from CD4 are identified as being particularly effective at binding to gp120 and inhibiting or reducing HIV infection of human CD4.sup.+ cells by steric hinderance or catalytic inactivation of gp120. The invention thus encompasses improved CD4-based peptide compositions and therapeutic formulations with viral binding and HIV-inhibitory activity.

1. 5,603,933, Feb. 18, 1997, CD4 peptides for binding to viral envelope proteins; Victor A. Dwyer, IV, et al., 424/185.1; 435/5; 514/15, 16, 17, 18; 530/328, 329, 330, 402 [IMAGE AVAILABLE]

1 USPAT 1 ARLOT, PIERRE/IN E12 USPAT 3 ARLOTT, COLIN/IN

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L11 4 "ARLINGHAUS, RALPH B"/IN

=> d 111 ab cit 1-4

US PAT NO: 5,603,933 [IMAGE AVAILABLE] L11: 1 of 4

#### ABSTRACT:

Disclosed are compositions and methods for use in viral binding and inactivation and in protecting cells from viral infection, particularly, for use in protecting target human CD4.sup.+ cells from infection by HIV. Peptides including short sequences from CD4 are identified as being particularly effective at binding to gp120 and inhibiting or reducing HIV infection of human CD4.sup.+ cells by steric hinderance or catalytic inactivation of gp120. The invention thus encompasses improved CD4-based peptide compositions and therapeutic formulations with viral binding and HIV-inhibitory activity.

1. 5,603,933, Feb. 18, 1997, CD4 peptides for binding to viral envelope proteins; Victor A. Dwyer, IV, et al., 424/185.1; 435/5; 514/15, 16, 17, 18; 530/328, 329, 330, 402 [IMAGE AVAILABLE]

US PAT NO: 5,369,008 [IMAGE AVAILABLE] L11: 2 of 4

#### ABSTRACT:

The present invention provides methods for detecting and quantitating BCR-ABL gene products and other abnormal ABL gene products of Ph.sup.1 -positive leukemic cells. The invention further provides methods for determining the relative number of leukemic cells compared with normal ABL cells to assess the tumor burden of a patient. In another aspect, the methods of the present invention can be used to determine a specific phase of leukemia, particularly chronic-phase CML.

2. 5,369,008, Nov. 29, 1994, Methods for the detection of BCR-ABL and abnormal ABL proteins in leukemia patients; Ralph B. Arlinghaus, et al., 435/7.23, 15, 183, 184, 814; 436/63, 64, 514, 813; 530/388.8, 388.85 [IMAGE AVAILABLE]

US PAT NO: 5,128,319 [IMAGE AVAILABLE] L11: 3 of 4

## ABSTRACT:

An active peptide consisting essentially of 7 to about 30 residence and having a sequence that corresponds to a conserved domain of an HIV protein is disclosed, as is a multimer containing that peptide, an aqueous composition containing the multimer and methods of using and making the same. The aqueous composition containing an immunologically effective amount of an active peptide multimer, when introduced into an immunocompetent host animal in an immunologically effective amount, is capable of inducing cellular immunity against the native HIV protein to which the active peptide of the multimer corresponds in sequence, but is not capable of inducing production of antibodies that immunoreact with that native HIV protein.

3. 5,128,319, Jul. 7, 1992, Prophylaxis and therapy of acquired immunodeficiency syndrome; Ralph B. Arlinghaus, 424/188.1, 208.1;

514/12, 13, 14, 15, 16 [IMAGE AVAILABLE]

US PAT NO:

5,126,399 [IMAGE AVAILABLE]

L11: 4 of 4

## ABSTRACT:

Disclosed are peptidyl-resin conjugates made up of an immunogenic/antigenic peptide conjugated to a polyamide resin, wherein the peptide incorporates a helper T-cell epitope. The inclusion of a T-cell epitope in this peptide sequence provides particular benefits in the preparation of site-directed reagents intended as immunogens. In exemplary studies, a synthetic peptide predicted from Abelson murine leukemia virus abl oncogene (residues 389-403) was synthesized with a T-cell active epitope of 7 amino acids placed at its N-terminus (T-abl-resin). The T-abl-resin construct was found to greatly stimulate the immune response giving significantly higher specific antibody titers than abl-resin controls.

4. 5,126,399, Jun. 30, 1992, Methods and compositions for the preparation and use of site-directed immunologic reagents; Ralph B. Arlinghaus, et al., 525/54.1; 514/2, 13, 14, 15, 16 [IMAGE AVAILABLE]